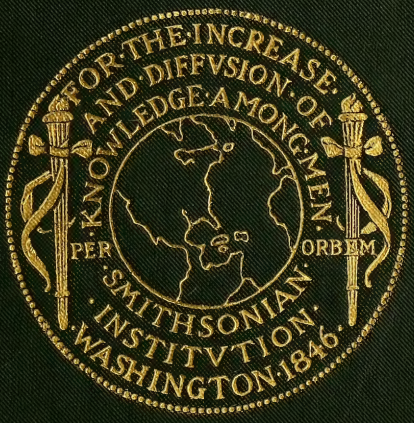
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BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM

No. 53—Part II

WASHINGTON
GOVERNMENT PRINTING OFFICE
1907

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CATALOGUE

OF THE

TYPE AND FIGURED SPECIMENS

OF

FOSSILS, MINERALS, ROCKS AND ORES

IN THE

DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM

PREPARED UNDER THE DIRECTION OF

GEORGE P. MERRILL

HEAD CURATOR OF GEOLOGY

Part II—FOSSIL VERTEBRATES; FOSSIL PLANTS; MINERALS, ROCKS, AND ORES

WASHINGTON
GOVERNMENT PRINTING OFFICE
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PREFACE.

This volume forms Part II of the Catalogue of Type Specimens in the Department of Geology, in the United States National Museum, Part I of which was issued in 1905. It was expected that the two parts would form one volume. It became evident, however, that such a volume would be cumbersome, and hence it was divided into two parts, the first being devoted wholly to fossil invertebrates. Part II therefore comprises Section II, devoted to fossil vertebrates; Section III, to fossil plants, and Section IV, to minerals, rocks, and ores. As with Part I, the catalogue closes with January 1, 1905. No changes of importance have been made, and it remains only to note that the work of supervising the preparation of Section II, which it was expected would fall upon Mr. Lucas, was assigned to others, as is mentioned in the introduction.

GEORGE P. MERRILL,
Head Curator of Geology.

JUNE 1, 1907.

SECTION II.

CATALOGUE OF THE TYPES, COTYPES, AND FIGURED SPECIMENS OF FOSSIL VERTEBRATES IN THE DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM.

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INTRODUCTION.

The list of types, cotypes, paratypes, and figured specimens (plesiotypes) of vertebrate fossils here given was begun under the direction of Mr. F. A. Lucas while acting curator of the section of vertebrate paleontology, and has been revised and brought to completion by Messrs. J. W. Gidley and C. W. Gilmore, assisted by Mrs. M. S. F. Jouy and Miss M. W. Moodey.

It can not be claimed that the list is absolutely complete, for the reason that much material still remains in boxes in storage. The withdrawal of Mr. Lucas from the Museum seems to render advisable the publication of the catalogue at this time.

The arrangement, as in the case of the invertebrate section, is alphabetical, and in each case is given a brief description of the specimen, horizon, locality, the place and date of publication, and the synonymy.

As will be noted, there are represented types (and cotypes) of some 385 species, many of which are of great value, since they were obtained by the early explorers, including Evans, Hayden, Cope, and Marsh, and comprise many of the types on which Leidy, Cope, and Marsh founded much of their early work in vertebrate paleontology. The material was obtained mainly under the auspices of the various United States geological surveys and exploring expeditions.

CATALOGUE OF THE TYPES, COTYPES, AND FIGURED SPECIMENS OF FOSSIL VERTEBRATES IN THE DEPARTMENT OF GEOLOGY, U. S. NATIONAL MUSEUM.

BIRDS.

1120. **Diatryma giganteum** Cope. Type.
Parts of tarso-metatarsus. Eocene. New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1876, pp. 10, 11; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 70, pl. 32, figs. 23–25.

4978. **Hesperornis regalis** Marsh. Plesiotype.
Skeleton. Niobrara (Cretaceous). Kansas.

Lucas, Proc. U. S. Nat. Mus., XXVI, 1903, pp. 545–550, text figs. 3, 4; Smithsonian Misc. Coll. (Quart. issue), XLV, 1903, p. 95, pl. 27.

4976. **Mancalla californiensis** Lucas. Type.
Proximal portion of left humerus. Miocene. Los Angeles, California.

Lucas, Proc. U. S. Nat. Mus., XXIV, 1901, pp. 133, 134, text figs. 1–3.

2166. **Puffinus eyermani** Shufeldt. Type.
Tibia and tarsus. Middle Miocene. South of France.

Shufeldt, Proc. Acad. Nat. Sci. Phila., 1896, p. 511, pl. 24, figs. 3, 4, 8; p. 513, text fig. 1.

2168. **Tantalus milne-edwardsi** Shufeldt. Type.
Upper end of tibia. Middle Miocene. South of France.

Shufeldt, Proc. Acad. Nat. Sci. Phila., 1896, p. 513, text fig. 1.

FISHES.

1629. **Acanthodes? pristis** Clarke. Type.
Part of dermal armor. Naples (Devonian). Sparta, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 42.

=Acanthoëssus? pristis.

1629. **Acanthoëssus? pristis** (Clarke). See Acanthodes? pristis.

3992. **Amia dictyocephala** Cope. Paratype.
Portion of skeleton, lacking head and tail, on slab. Eocene. South Park, Colorado.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr. (2), No. 1, 1875, p. 3; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 745, pl. 59, fig. 1.

2181. **Amia (Protamia) media** Leidy. Type.
Centrum of vertebra. Bridger (Eocene). Junction of Big Sandy and Green rivers, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1873, p. 98; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 188, pl. 32, figs. 7–9.

5374. **Amia scutata** Cope. Type.
Partial skeleton with posterior and anterior portions wanting. Eocene. South Park, Colorado.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr. (2), No. 1, 1875, p. 3; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 745, pl. 60, fig. 1.

3996. **Amphiplaga brachyptera** Cope. Type.
Partial skeleton lacking head. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 812; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 84, pl. 12, fig. 4.

4011. **Amphiplaga brachyptera** Cope. Plesiotype.
Nearly complete skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 48, pl. 7, fig. 5.

4063. **Amyzon commune** Cope. Type.
Complete skeleton on slab. Florissant (Eocene). Florissant, South Park, Colorado.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., I, No. 2, 1874, p. 50; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 749, pl. 5, fig. 21.

4074. **Amyzon mentale** Cope. Cotypes.
4075. Partial skeleton on slab, and portion of skeleton lacking tail and anterior portion of head. Eocene. Osino, Nevada.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 481; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 749, pl. 59, fig. 2; pl. 60, fig. 2.

4231. **Anædopogon tenuidens** Cope. Type.
Partial skeleton including head. Upper Cretaceous. Near Para, Brazil.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 54.

13. **Apateacanthus vetustus** (Clarke). See Pristacanthus vetustus.

4045. **Asineops pauciradiatus** Cope. Type.
Complete skeleton. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 813; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 87, pl. 14, fig. 1.

4009. **Asineops squamifrons** Cope. Type.
Anterior portion of skeleton; head missing. Green River (Eocene). Green River, Wyoming.

Cope, Proc. Amer. Philos. Soc., XI, 1870, p. 381; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 85, pl. 9, fig. 5.

2351. **Astrapis desiderata** Walcott. Type.
Plates. Middle Ordovician. Near Canyon City, Colorado.

Walcott, Bull. Geol. Soc. Amer., III, 1892, p. 166, pl. 3, figs. 6–14; pl. 4, figs. 1–4.

3518. **Chitinodus latus** (Leidy). See Helodus coxanus.

2366. **Cladodus formosus** Hay. Type.
Tooth. Devonian. Northwest edge of Lime mesa, south slope of Needle Mountain, Colorado.

Hay, Amer. Geol., XXX, 1902, p. 373, text fig. 1.

4854. **Cladodus girtyi** Hay. Type.
Tooth. Coal Measures. Colorado.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 98, text fig. 2.

3969. **Clastes** sp. undet.
Portions of head plate and scales. Bridger (Eocene). Hams Fork of Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, figs. 3–14.

3972. **Clastes** sp. undet (large).
Scales. Bridger (Eocene). Hams Fork of Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, figs. 17–23.

3973. **Clastes** sp. undet.
Centrum of vertebra. Bridger (Eocene). Hams Fork of Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, fig. 45a.

2582. **Clastes aganus** Cope. Type.
Fragments of cranium, vertebræ, and scales. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 38, pl. 23, figs. 10–29.
=Lepisosteus aganus.

3974. **Clastes anax** Cope. Type.
Fragments of skull and scales. Bridger (Eocene). Hams Fork of Green River, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 633; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 53, pl. 2, figs. 50–52.
=Lepisosteus atrox (fide Hay).

3970. **Clastes atrox** (Leidy)? Plesiotype.
Portions of lower jaw and scales (in conglomerate mass). Bridger (Eocene). Hams Fork of Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 54, pl. 2, figs. 1–2b.
=Lepisosteus atrox.

3971. **Clastes cycliferus** Cope. Type.
Portions of head plates and scales. Eocene. Washakie Basin, Mammoth Buttes, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 634; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 54, pl. 2, figs. 25–45.

=Lepisosteus cycliferus.

2584. **Clastes integer** Cope. Type.
Cranial bones, vertebræ, and scales. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 41, pl. 24, figs. 1–16.

=Lepisosteus integer.

86. **Clupea alta** Leidy. Type and paratypes.
Specimens on slab. Green River (Eocene). Green River, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 196, 347, pl. 17, fig. 2.

=Diplomystus altus.

87. **Clupea humilis** Leidy. Type.
Specimen on slab. Green River (Eocene). Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sic. Phila., 1856, p. 256; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 195. 347, pl. 17, fig. 1.

=Diplomystus humilis.

2590. **Corax pristodontus** (Agassiz). See Galeocerdo pristodontus.

4683. **Ctenacanthus acutus** Eastman. Type.
Spine. Keokuk (Mississippian). Keokuk, Iowa.

Eastman, Amer. Journ. Sci. (4), III, 1897, p. 12, fig. 2.

4846. **Ctenacanthus decussatus** Eastman. Type.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX. No. 3, 1902, p. 84, pl. 6, fig. 2.

3393. **Ctenacanthus longinodosus** Eastman. Type.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, p. 78, fig. 8, pl. 5, fig. 2.

4844. **Ctenacanthus lucasi** Eastman. Type.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, p. 80, pl. 6, fig. 1.

3383. **Ctenacanthus solidus** Eastman. Type.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, p. 90, text fig. 13.

4843. **Ctenacanthus solidus** Eastman. Paratype.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, p. 90, pl. 7, fig. 3.

4845. **Ctenacanthus spectabilis** St. John and Worthen. Plesiotype.
Spine. Kinderhook (Mississippian). Quarry, Marshall County, Iowa.

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, p. 88, pl. 5, fig. 1.

3385. **Ctenacanthus venustus** Eastman. Paratype.
Spine. Kinderhook (Mississippian). Iowa?

Eastman, Bull. Mus. Comp. Zoöl., Harvard Coll., XXXIX, No. 3, 1902, pp. 81–83, text fig. 10, pl. 3, fig. 2.

3391. **Ctenacanthus xiphias** St. John and Worthen. Type.
Spine. Keokuk (Mississippian). Keokuk, Iowa.

Eastman, Amer. Journ. Sci. (4), III, 1897, p. 11, fig. 1.

4475. **Ctenerpeton alveolatum** Cope. Type.
Skeleton on slab. Coal Measures. Cannelton, Pa.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 83, pl. 3, fig. 1.

2345. **Dapedoglossus acutus** (Leidy). Plesiotype.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 72.

=Phareodus acutus.
See Phareodon sericeus.

3987. **Dapedoglossus acutus** (Leidy). Plesiotypes.
4091. (1) Right dentary bone containing teeth; (2) left dentary bone containing teeth. Bridger (Eocene). Hams Fork, Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 72, pl. 5, (1) figs. 18, 18a; (2) figs. 19, 19a.

=Phareodus acutus.

4003. **Dapedoglossus æquipinnis** Cope. Type.
Specimen on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 77; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 73, pl. 7, fig. 2.

=Phareodus æquipinnis.

4014. **Dapedoglossus testis** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 807; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 71, pl. 7, fig. 1.

=Phareodus testis.

4006. **Dapedoglossus testis** Cope. Paratypes.
4007. (1) Head and anterior portion of skeleton; (2) complete skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 807; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 71, pl. 8, (2) fig. 1, (1) fig. 2.

=Phareodus testis.

2352. **Dictyorhabdus priscus** Walcott. Type.
Chordal sheath. Middle Ordovician. Near Canyon City, Colorado.

Walcott, Bull. Geol. Soc. Amer., III, 1892, p. 165, pl. 3, fig. 1–5.

65. **Dinichthys newberryi** Clarke. Type.
Right ramus of jaw. Devonian. Bristol, Ontario County, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 17, pl. 1, fig. 1.

4019. **Diplomystus altus** (Leidy). Plesiotype.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 79, pl. 10, fig. 5.

86. **Diplomystus altus** (Leidy). See Clupea alta.

4005. **Diplomystus analis** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 809; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 75, pl. 8, fig. 3.

3998. **Diplomystus analis** Cope. Paratypes.
4004. Skeleton and impression on slab and skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 809; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 75, pl. 7, fig. 4; pl. 10, fig. 2.

4022. **Diplomystus humilis** Leidy. Plesiotype.
Complete skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 77, pl. 10, fig. 4.

87. **Diplomystus humilis** (Leidy). See Clupea humilis.

4020. **Diplomystus pecterosus** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 810; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 76, pl. 10, fig. 3.

4338. **Dittodus lucasi** Hay. Type.
Impression of tooth in nodule. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 97, text fig. 1.

4848. **Elonichthys hypsilepis** Hay. Reverse of type.
Impression of fish in nodule. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Hay, Proc. Amer. Philos. Soc. XXXIX, 1900, pp. 117, 120, pl. 7 (as Elonichthys peltigerus hypsilepis).

2180. **Enchodus shumardi** Leidy. Type.
Dentary bone containing six teeth. Cretaceous. Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1856, p. 257; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 289, 347, pl. 17, fig. 20.

2350. **Eriptychius americanus** Walcott. Type.
Scales. Middle Ordovician. Near Canyon City, Colorado.

Walcott, Bull. Geol. Soc. Amer., III, 1892, p. 167, pl. 4, figs. 5–11.

3997. **Erismatopterus endlichi** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. Geol. and Geogr. Surv. Terr., III, 1877, p. 811; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 82, pl. 12, fig. 5.

2588. **Galeocerdo** sp. undet.
Tooth. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 22, fig. 16.

2590. **Galeocerdo pristodontus** (Agassiz). Plesiotype.
Tooth. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 38, pl. 22, fig. 18.

= Corax pristodontus.

2583. **Gar** sp. undet.
Scales and opercular bones. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 23, figs. 30, 31.

3518. **Helodus coxanus** Newberry. Type.
Symphysial teeth. Keokuk (Mississippian). Keokuk, Iowa.

Newberry, Trans. N. Y. Acad. Sci., XVI, 1897, p. 301, pl. 24, fig. 24.

= Chitinodus latus.

1682. **Hemiptychodus mortoni** (Mantell). See Ptychodus mortoni.
5461.

1981. **Holonema rugosa** (Claypole). Plesiotype.
Scale. Catskill (Devonian). Mansfield, Tioga County, Pennsylvania.

Cope, Proc. U. S. Nat. Mus., XIV, 1891, p. 456; Proc. Amer. Philos. Soc., 1892, p. 223, pl. 7, fig. 2.

1982. **Holonema rugosa** (Claypole). Plesiotype.
Pectoral spine. Catskill (Devonian). Mansfield, Tioga County, Pennsylvania.

Cope, Proc. U. S. Nat. Mus., XIV, 1891, p. 456, pl. 30, fig. 7.

4611. **Holoptychius flabellatus** Cope. Type.
Scale. Catskill (Devonian). Coxton Narrows, near Pittston, Pennsylvania.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 75, pl. 2, fig. 2.

4609. **Holoptychius latus** Cope. Type.
Scale. Catskill (Devonian). Factoryville, Pennsylvania.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 74, pl. 2, fig. 3.

4604. **Holoptychius serrulatus** Cope. Type.
Impression of scale. Catskill (Devonian). Mansfield, Tioga County, Pennsylvania.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 71, pl. 2, fig. 1.

4473. **Keraterpeton tenuicorne** Cope. Plesiotype.
Partial skeleton on slab. Coal Measures. Linton, Ohio.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 85, pl. 3, fig. 2.

Lepidosteus. See Lepisosteus.

2582. **Lepisosteus aganus** (Cope.) See Clastes aganus.

2175. **Lepisosteus atrox** Leidy. Type.
Anterior dorsal vertebra. Bridger (Eocene). Junction Big Sandy and Green rivers, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1873, p. 97; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 189, pl. 32, figs. 14, 15 (as Lepidosteus).

3970. **Lepisosteus atrox** Leidy. See Clastes atrox?

3974. **Lepisosteus atrox** Leidy. See Clastes anax.

3971. **Lepisosteus cycliferus** (Cope). See Clastes cycliferus.

2584. **Lepisosteus integer** (Cope). See Clastes integer.

2173. **Lepisosteus simplex** Leidy. Cotypes.
2174. (2) Basi-occipital, centra of three adjoining vertebræ, (1) and scales. Bridger (Eocene). Near Washakie Station, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1873, p. 78; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 191, pl. 32, (2) figs. 18, 26, (1) figs. 31–34 (as Lepidosteus).

2176. **Lepisosteus** sp. undet.
Centrum of vertebra. Bridger (Eocene). Junction Big Sandy and Green rivers, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 190, pl. 32, figs. 16, 17 (as Lepidosteus).

2177. **Lepisosteus** sp. undet.
Fragment of jaw. Bridger (Eocene). Junction of Big Sandy and Green rivers, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 190, pl. 32, fig. 25 (as Lepidosteus).

5477. **Lepisosteus** sp. undet.
Four scales. Bridger (Eocene). Little Sandy Creek, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 190, pl. 32, figs. 35–38 (as Lepidosteus).

5394. **Lepisosteus** sp. undet.
Scales. Bridger (Eocene). Junction Big Sandy and Green rivers, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 190, pl. 32, figs. 27–30 (as Lepidosteus).

4302. **Leuciscus turneri** Lucas. Type.
Skeleton on slab. Miocene. West side south end Big Smoky Valley, Silver Peak quadrangle, Esmeralda County, Nevada.

Lucas, Proc. U. S. Nat. Mus., XXIII, 1900, p. 333, pl. 8.

1987. **Megalichthys macropomus** Cope. Type.
Fish on slab. Carboniferous. Leavenworth, Kansas.

Cope, Proc. Amer. Philos. Soc., XXX, 1892, p. 226, pl. 8; Journ. Acad. Nat. Sci. Phila. (2), IX, 1894, p. 436, pl. 19, figs. 1, 1a.

=Parabatrachus macropomus.

3994. **Mioplosus beani** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv., III, 1877, p. 816; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 91, pl. 12, fig. 3.

3995. **Mioplosus longus** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv., III, 1877, p. 815; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 90, pl. 12, fig. 2.

1977. **Mycterops ordinatus** Cope. Type.
Nuchal buckler and cranial plates. Carboniferous. Cannelton, Beaver County, Pennsylvania.

Cope, Amer. Nat., XX, 1886, p. 1029, fig. 1; XXII, 1888, p. 914, pl. 15, fig. 3.

2118. **Mylocyprinus kingii** Cope. Type.
Jaw fragments. Pleistocene. Catherines Creek, Idaho.

Cope, Proc. Amer. Philos. Soc., XI, 1870, p. 544.

=Mylocyprinus robustus.

2118. **Mylocyprinus robustus** Leidy. See Mylocyprinus kingii.

2589. **Otodus** sp. undet.
Tooth. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 22, fig. 17.

2591. **? Otodus** sp. undet.
Tooth. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 38, pl. 22, fig. 19.

1628. **Palæoniscus devonicus** Clarke. Type.
Scales. Genesee (Devonian). Sparta, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 41.

=Paleoniscum devonicum.

33904. **Palæoniscus leidyana** Lea. Type.
Scale on slab. Upper Coal Measures. Wilkesbarre, Pennsylvania.

Lea, Journ. Acad. Nat. Sci. Phila. (2), II, 1853, p. 206, pl. 20, figs. 4, 5.

=Rhadinicthys leidyianus.

3961. **Pappichthys corsoni** Cope. Type.
Part of dentary bone. Bridger (Eocene). Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 634; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 60, pl. 4, fig. 21.

3960. **Pappichthys corsoni** Cope. Plesiotype.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 60, pl. 4, fig. 30.

See Pappichthys symphysis.

5475. **Pappichthys corsoni** Cope. Plesiotypes.
5476. Vertebræ. Bridger (Eocene). Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 60, pl. 4, (1) figs. 32–36, (2) 23–29.

3968. **Pappicthys lævis** Cope. Type.
Portions of jaws and centra of vertebræ. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 636; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 58, pl. 3, figs. 2–11.

3959. **Pappichthys medius** (Leidy). Plesiotype.
Centra of vertebræ. Bridger (Eocene). Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 60, pl. 4, figs. 7–20.

3958. **Pappichthys plicatus** Cope. Type.
Portion of jaws and centra of vertebræ. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 635; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 59, pl. 4, figs. 1–6.

3965. **Pappichthys sclerops** Cope. Type.
Left dentary bone. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 635; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 57, pl. 3, fig. 1.

3960. **Pappichthys symphysis** Cope. Type.
Fragment of vertebra. Bridger (Eocene). Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 634.

=Pappichthys corsoni.

3963. **Pappichthys** sp. undet.
Basi-occipital and caudal vertebræ. Bridger (Eocene). Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, figs. 55–57.

3962. **Pappichthys** sp. undet.

Centra of vertebræ. Bridger (Eocene). Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, figs. 53–54b.

5450. **Pappichthys** sp. undet.
Caudal vertebra. Bridger (Eocene). Wyoming.
Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, fig. 58.

3964. **Pappichthys** sp. undet.
Basi occipital. Bridger (Eocene). Wyoming.
Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, fig. 59.

5451. [?**Pappichthys** sp. undet.]
Centrum of vertebra. Bridger (Eocene). Wyoming.
Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, pl. 2, figs. 60–60b (as unknown fish).

1987. **Parabatrachus macropomus** (Cope). See Megalichthys macropomus.

4296. **Peripristis semi-circularis** Newberry and Worthen. Plesiotype.
Teeth. Upper Carboniferous. Rock Bluff, Bellevue, Nebraska.
St. John, Final Rept. U. S. Geol. Surv. Nebraska and Adjacent Terr., 1872, p. 242, pl. 3. figs. 3, 4; pl. 4, fig. 20a, b.

2345. **Phareodon sericeus** Cope. Type.
Two teeth. Bridger (Eocene). Wyoming.
Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 638.
=Phareodus acutus.
See Dapedoglossus acutus.

2178. **Phareodus acutus** Leidy. Type.
Portions of dentary containing teeth; portions of right and left premaxillary, and a portion of maxillary. Bridger (Eocene). Junction of Big Sandy and Green rivers, Wyoming.
Leidy, Proc. Acad. Nat. Sci. Phila., 1873, p. 99; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 193, pl. 32, figs. 47–51.

3987. **Phareodus acutus** Leidy. See Dapedoglossus acutus.
4091.

2345. **Phareodus acutus** Leidy. See Phareodon sericeus and Dapedoglossus acutus.

4003. **Phareodus æquipinnis** (Cope). See Dapedoglossus æquipinnis.

4006. **Phareodus testis** (Cope). See Dapedoglossus testis.
4007.
4014.

4783 to 4791. **Pholidophorus americanus** Eastman. Cotypes.
Several complete specimens and fragments of other individuals. Jurassic. Black Hills, South Dakota.
Eastman, Science (2), IX, 1899, p. 642; Bull. Geol. Soc. Amer., X, 1899, p. 398, pl. 45, figs. 1–3; pl. 46, figs. 1, 2; pl. 47, figs. 1 (?), 2–5.

2179. **Pimelodus antiquus** Leidy. Type.
Pectoral spine with dentary bones. Tertiary (Eocene). Junction Big Sandy and Green rivers, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1873, p. 99; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 193, pl. 32, figs. 44–46.

4399. **Platysomus lacovianus** Cope. Type.
Impression of fish in nodule. Coal Measures. Mazon Creek near Morris, Grundy County, Illinois.

Cope, Proc. U. S. Nat. Mus., XIV, 1891, p. 462, pl. 31, fig. 11.

4996. **Plioplarchus septemspinosus** Cope. Type.
Skeleton on slab. Tertiary. Van Horn's ranch, Grant County, Oregon.

Cope, Amer. Nat., XXIII, 1889, p. 625.

4236. **Plioplarchus sexspinosus** Cope. Type.
Skeleton without head on slab. Tertiary. Near Sentinel Butte, Billings County, North Dakota.

Cope, Amer. Journ. Sci. (3), XXV, 1883, p. 416; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 729.

4695. **Plioplarchus whitei** Cope. Type.
Complete skeleton and impression on slab. Upper Cretaceous? Pilot Knob, South Dakota.

Cope, Amer. Journ. Sci. (3), XXV, 1883, p. 414; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 728, pl. 24g, fig. 1.

4041. **Priscacara clivosa** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 76; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 96, pl. 13, fig. 3.

4042. **Priscacara cypha** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 817; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 94, pl. 13, fig. 2.

4043. **Priscacara liops** Cope. Type.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 818; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 97, pl. 14, fig. 2.

4044. **Priscacara liops** Cope. Paratype.
Skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 818; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 97, pl. 14, fig. 3.

4039. **Priscacara oxyprion** Cope. Type.
Skeleton on slab. Green River (Eocene). Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 74; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 94, pl. 14, fig. 5 (as P. serrata on plate).

4008. **Priscacara pealei** Cope. Cotypes.
4037. Skeletons on slabs. Green River (Eocene). Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 75; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 96, pl. 8, fig. 4; pl. 14, fig. 4.

4002. **Priscacara serrata** Cope. Type.
Complete skeleton on slab. Green River (Eocene). Twin Creek, Wyoming.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 816; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 93, pl. 13, fig. 1.

13. **Pristacanthus vetustus** Clarke. Type.
Spine. Naples (Devonian). Milo, Yates County, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 42, pl. 1, fig. 7.

=Apateacanthus vetustus.

1682. **Ptychodus mortoni** Mantell. Plesiotype.
5461. (1) Two teeth; (2) three teeth. Cretaceous. Chalk Bluff Creek, Kansas.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 295, pl. 18, (1) figs. 1–4, (2) figs. 5–10.

=Hemiptychodus mortoni.

4090. **Pyrmnetes longiventer** Cope. Type.
Impression and relief of nearly complete skeleton. Tertiary? Tuxtla, Chiapas, Mexico.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 52.

33904. **Rhadinichthys leidyianus** (Lea). See Palæoniscus leidyianus.

3985. **Rhineastes arcuatus** Cope. Type.
Spine and fragments. Bridger (Eocene). Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, pp. 638, 641; Rept. U. S. Geol. Surv. Terr., III, 1884, pp. 63, 66, pl. 5, figs. 12, 12a, 12b.

3980. **Rhineastes calvus** Cope. Type.
Fragments of cranium, dorsal spine. Bridger (Eocene). Mammoth Buttes, South Bitter Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr., for 1872, 1873, pp. 638, 640; Rept. U. S. Geol. Surv. Terr., III, 1884, pp. 63, 65, pl. 5, figs. 3, 3a, 4.

4086. **Rhineastes pectinatus** Cope. Type.
Head and anterior part of skeleton. Eocene. Florissant, Colorado.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1874, p. 49; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 747, pl. 5, fig. 13.

3984. **Rhineastes peltatus** Cope. Type.
Occipital-parietal bone and dorsal spine. Bridger (Eocene). South Bitter Creek, Wyoming.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 486; Rept. U. S. Geol. Surv. Terr., III, 1884, pp. 63, 64, pl. 5, figs 1, 1a, 2, 2a.

4099. **Rhineastes radulus** Cope. Type.
Fragments of skull. Bridger (Eocene). Bad Lands, Cottonwood Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 638; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 67, pl. 5, figs. 14–17.

3977. **Rhineastes smithii** Cope. Type.
Basi-occipital, vertebræ, pectoral spine, and articular of mandible. Bridger (Eocene). Mammoth Buttes, South Bitter Creek, Wyoming.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 486; Rept. U. S. Geol. Surv. Terr., III, 1884, pp. 63, 64, pl. 5, figs. 5–9.

3978. **Rhineastes smithii** Cope. Paratypes.
3979. (1) Pectoral spine, and (2) part of dentary bone. Bridger (Eocene). Mammoth Buttes, South Bitter Creek, Wyoming.

Cope, Proc. Amer. Philos. Soc., XII, 1873, p. 486; Rept. U. S. Geol. Surv. Terr. III, 1884, pp. 63, 64, pl. 5, (1) fig. 10, (2) fig. 11.

4337. **Rhizodopsis mazonius** Hay. Type.
Impression of scale in nodule. Carboniferous. Mazon Creek, near Morris, Grundy County, Illinois.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 110.

4392. **Sagenodus browniæ** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 81, pl. 1, fig. 7.

=Sagenodus occidentalis.

4386. **Sagenodus conchiolepis** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 79, pl. 1, fig. 4.

=Sagenodus lacovianus.

4394. **Sagenodus foliatus** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 77, pl. 1, fig. 1.

4372. **Sagenodus foliatus** Cope. Paratype.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, pp. 76, 77.

4363. **Sagenodus gurleianus** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 82, pl. 1, fig. 9. [Gurleianus preoccupied made type of Sagenodus textilis Hay.]

=Sagenodus textilis.

4373. **Sagenodus lacovianus** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 79, pl. 1, fig. 5.

4386. **Sagenodus lacovianus** Cope. Plesiotype.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 108.

See Sagenodus conchiolepis.

4368. **Sagenodus magister** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 81, pl. 1, fig. 8.

=Sagenodus reticulatus.

4392. **Sagenodus occidentalis** (Newberry and Worthen). Plesiotype.

Hay, Proc. Amer Philos. Soc., XXXIX, 1900, p. 103.

See Sagenodus browniæ.

4364. **Sagenodus quincunciatus** Cope. Type.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 80, pl. 1, fig. 6.

4365. **Sagenodus quincunciatus** Cope. Paratype.
Impression and relief of scale in nodule. Coal Measures. Mazon Creek, Grundy County, Illinois.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 80.

4368. **Sagenodus reticulatus** (Newberry and Worthen). Plesiotype.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 106.

See Sagenodus magister.

4390. **Sagenodus reticulatus** (Newberry and Worthen).
4391. Plesiotypes.
Scales. Coal Measures. Linton, Ohio.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 78, pl. 1, (1) fig. 2, (2) fig. 3.

4363. **Sagenodus textilis** Hay. Type.

Hay, Amer. Nat., XXXIII, 1899, p. 783.

See Sagenodus gurleianus.

3577. **Saurocephalus leanus** (Hays). Type.

Leidy, Trans. Amer. Philos. Soc. (2), XI, 1857, pp. 91–95, pl. 6, figs. 12–15.

See Saurodon leanus.

3577. **Saurodon leanus** Hays. Type.
Anterior part of both jaws. Greensand (Cretaceous). Near Moorestown, New Jersey.

Hays, Trans. Amer. Philos. Soc. (2), III, 1830, pp. 471–477, pl. 16, figs. 1–10.

=Saurocephalus leanus.

2209. **Scylliorhinsis gracilis** Williston. Type.
Tooth. Greensand (Cretaceous). Greenleaf Ranch, ten miles west of Belvidere, Kansas.

Williston, Kansas Univ. Quar., VII, 1900, p. 245, pl. 24, fig. 6.

2207. **Scylliorhinsis planidens** Williston. Type.
Tooth. Greensand (Cretaceous). Greenleaf Ranch, ten miles west of Belvidere, Kansas.

Williston, Kansas Univ. Quar., VII, 1900, p. 245, pl. 24, fig. 7.

2208. **Scylliorhinsis rugosus** Williston. Type.
Tooth. Greensand (Cretaceous). Greenleaf Ranch, ten miles west of Belvidere, Kansas.

Williston, Kansas Univ. Quar., VII, 1900, p. 245, pl. 24, fig. 5.

4855. **Strepsodus arenosus** Hay. Type.
Scale in nodule. Lower Carboniferous. Near Colliers Station, Blair County, Pennsylvania.

Hay, Proc. Amer. Philos. Soc., XXXIX, 1900, p. 113, text fig. 3.

4979. **Syllæmus latifrons** Cope. Type.
Head and body. Cretaceous. New Mexico?

Cope, Rept. U. S. Geol. Surv. Terr., II, 1875, pp. 181, 273; Rept. U. S. Geol. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 27, pl. 23, figs. 1, 2.

1717. **Tamiobatis vetustus** Eastman. Type.
Cranium. Devonian? Eastern part of Powell County, Kentucky.

Eastman, Amer. Journ. Sci. (4), III, 1897, p. 85, text fig., pl. 1.

4058. **Trichophanes foliarum** Cope. Type.
Anterior half of skeleton and reverse on slabs. Oligocene. South Park, Colorado.

Cope, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 73; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 753, pl. 69, fig. 4.

4060. **Trichophanes hians** Cope. Type.
Skeleton on slab. Oligocene. Osino, Nevada.

Cope, Proc. Amer. Philos. Soc., XII, 1872, p. 481; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 753, pl. 69, fig. 3.

MAMMALS.

2145. **Aceratherium acutum** Marsh. Type.
Skull. Republican River (Upper Miocene). Quarry E, near Long Island, Kansas.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 335, text figs. 3, 4.

=Teleoceras fossiger.

138. **Aceratherium nebrascensis** (Leidy). Type and paratype.
139. Leidy, Proc. Acad. Nat. Sci. Phila., 1851, p. 331.

=Hyracodon nebrascensis.
See Rhinoceros nebrascensis.

114. **Aceratherium occidentale** (Leidy). Type.

Leidy, Proc. Acad. Nat. Sci. Phila., 1851, p. 331.

=Cænopus occidentalis.
See Rhinoceros occidentalis.

523. **Ælurodon ferox** Leidy. Type.
Upper sectorial. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 22; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 68, 367, pl. 1, figs. 13, 14.

=Ælurodon sævus.

127. **Ælurodon haydeni** (Leidy). See Canis (Epicyon) haydeni.

523. 128. **Ælurodon sævus** (Leidy). See Ælurodon ferox and Canis sævus.

2040. **Ælurodon ursinus** (Cope). See Canis ursinus.

2137. **Allacodon fortis** Marsh. Type.
Upper premolar. Laramie (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 255, pl. 7, fig. 4.

2138. **Allacodon pumilis** Marsh. Type.
Three upper teeth. Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXVIII, 1889, p. 179; XLIII, 1892, p. 255, pl. 7, fig. 3.

2144. **Allacodon rarus** Marsh. Type.
Upper molar. Cretaceous. Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 256, pl. 7, fig. 5.

2679. 2680. **Allodon fortis** Marsh. Paratypes.
(1) Lower incisor; (2) left upper maxillary containing three premolars associated with fragments of skull. Morrison (Jurassic). Como Bluffs, Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 331, pl. 7, (1) figs. 14, 15; (2) figs. 11–13.

2681. 2682. **Allodon laticeps** Marsh. Plesiotypes.
(1) Upper jaw containing m^1 and three premolars; (2) left upper jaw with last premolar and two molars. Morrison (Jurassic). Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 331, pl. 7, (1) figs. 5, 6; (2) figs. 3, 4.

4289. **Allops crassicornis** Marsh. Type.
Skull. White River (Oligocene). South Dakota.

Marsh, Amer. Journ. Sci. (3), XLII, 1891, p. 268.—Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 102.

=Titanotherium crassicornis.

4251. **Allops serotinus** Marsh. Type.
Skull. White River (Oligocene). Bad Lands, South Dakota.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 331.—Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 102.

=Titanotherium serotinum.

2329. **Ambloctonus sinosus** Cope. Type.
Portion of right maxillary containing crowns and roots of last three molars (m^1–m^3) with other portions of the skull, including portion of left maxillary containing canine and last molar of left side, associated with portion of left lower jaw containing crowns and roots of last three molars (m_1–m_3) and fragments of limb bones apparently of the same individual. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 8; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 91, pl. 33, figs. 1–10.—Osborn and Wortman, Bull. Amer. Mus. Nat. Hist., IV, No. 1, 1892, p. 99, text fig. 5E, pp. 106, 107, text fig. 8.

5377. **Ambloctonus sinosus** Cope. Paratype.
Portion of right lower jaw containing last three molars (m_1–m_3). Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 8; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 91, pl. 33, fig. 11.

658. **Amphicyon vetus** (Leidy). Type.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 32, 369, pl. 1, figs. 1, 2, 3.

= Daphœnus vetus.

573. **Anchitherium (Hypohippus) affinis** Leidy. Type.
Upper milk molar. Loup Fork (Upper Miocene). Niobrara River, Fort Niobrara, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26.

= Hypohippus affinis.

5393. **Anchitherium agreste** Leidy. Type.
Portion of lower jaw containing three teeth, p_4, m_1, m_3. Lower Miocene. Red Rock Creek, head of Jefferson Fork, Missouri River, Montana.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 251, pl. 7, figs. 16, 17.

2359. **Anchitherium bairdii** (Leidy). Type.

Leidy, Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 67, pl. 10, fig. 24; pl. 11, figs. 6, 7.

= Mesohippus bairdii.
See Palæotherium bairdii.

567. **Anchitherium (Parahippus) cognatus** Leidy. Type.
Three right upper milk molars, dp^2–dp^4, associated with right lower milk molar, dp_2. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26.

= Parahippus cognatus.

774. **Aphelops crassus** (Leidy). See Rhinoceros crassus. (Also catalogue numbers 775, 805, 5392.)

3161. **Aphelops fossiger** Cope. Plesiotypes.
Teeth and various bones of skeletons. Pliocene. Williston, Levy County, Florida.

Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 41, pl. 8, figs. 1–12, 14; pl. 9; pl. 11, figs. 1, 2, 5–10; pl. 12; pl. 13, figs. 1–5; pl. 14, figs. 1–7; pl. 15, figs. 1–8.

=Aphelops proterus.
(See also catalogue numbers 3162–3169, 3176, 3178–3189, 3191–3193, 3276–3279, 3321, 3371, 3374, 3375, 3405, 3406, 3411, 3594–3596, 3611, 3613, 3616, 3617, 3676, 3678, 3682–3687, 3701–3706, 3715.)

3190. **Aphelops fossiger** Cope. Plesiotype.

Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 41, pl. 9, fig. 14.

=Aphelops proterus.
See Rhinoceros proterus.

115. **Aphelops jemezanus** Cope. Type.
Portion of right lower jaw containing three molars (m_1–m_3). "Loup Fork" (Miocene). Near Santa Clara, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 260; Rept. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 319, pl. 73, figs. 3, 4; pl. 74, fig. 4.

3280. **Aphelops longipes** (Leidy). See Rhinoceros longipes and
3376. Aphelops malacorhinus.

3280. **Aphelops malacorhinus** Cope. Plesiotypes.
3376.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 45, pl. 11, fig. 11; pl. 13, figs. 6, 7.

=Aphelops longipes.
See Rhinoceros longipes.

3234 **Aphelops malacorhinus** Cope. Plesiotypes.
to Teeth and limb bones of various individuals. Pliocene.
3239. Williston, Levy County, Florida.
3369.
3370. Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 45, pl. 10, figs. 11–16; pl. 11, figs. 3, 4; pl. 14, fig. 2; pl. 16, figs. 5–10.
3554.
3610. =Aphelops longipes.
5482.

3177. **Aphelops meridianus** (Leidy). See Rhinoceros meridianus.

3190. **Aphelops proterus** (Leidy). See Rhinoceros proterus and Aphelops fossiger.

3229. **Aphelops** sp. undet.
to Teeth of various individuals. Pliocene. Levy County,
3233. Florida.

Leidy and Lucas, Trans. Wagner Free Inst. Sci., IV, 1896, pl. 10, figs. 1–10.

146. **Archæotherium mortoni** Leidy. Plesiotype.
Greater portion of skull and lower jaws containing parts of both milk and adult dentition. White River (Oligocene). South Dakota.

Leidy, Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 558, pl. 10, figs. 1–3; Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 57, pl. 8; pl. 9, figs. 1, 2, 5; pl. 10, figs. 1–7.

=Elotherium mortoni.

783. **Archæotherium robustum** Leidy. Type.
Fragments of two lower molars and part of canine. White River (Oligocene). South Dakota.

Leidy, Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 572; Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 66, pl. 10, figs. 8–13.

=Elotherium mortoni.
See Arctodon sp. undet.

783. **Arctodon** sp. undet.
Molars and fragment of canine. White River (Oligocene). South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., V, 1851, p. 278.

=Elotherium mortoni.
See Archæotherium robustum.

2862. **Asthenodon segnis** Marsh. Cotype.
Portion of left lower jaw containing incisors, canine, and two premolars. Morrison (Jurassic). Como, Wyom. ing.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 336, pl. 9, fig. 6.

3649. **Auchenia major** Leidy. Type.
Right astragalus. Pliocene. Levy County, near Archer, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1886, p. 11.

=Procamelus major.

3435. **Auchenia minimus** Leidy. Type.
Right astragalus. Pliocene. Archer, Alachua County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1886, p. 11.

=Procamelus minimus.

3354. **Auchenia minor** Leidy. Type.
Right astragalus. Pliocene Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1886, p. 11.

=Procamelus minor.

4676. **Basilosaurus cetoides** (Owen). Plesiotype.
Pelvic girdle and right femur. Eocene. Cocoa, Alabama.

Lucas, Proc. U. S. Nat. Mus., XXIII, 1900, p. 327, pls. 5–7.

1121. **Bathmodon cuspidatus** Cope. Type.
Portion of last lower molar in fragment of jaw. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 30.

=Coryphodon cuspidatus.

111. **Bathmodon elephantopus** Cope. Type.
Skull and lower jaws. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. 2, 1874, p. 598; App. LL Ann. Rept. Chief Engineers, Rept. Geogr. Surv. W. 100th Merid., 1875, p. 1015, pls. 5, 6.

=Coryphodon elephantopus.

2614. **Bathmodon latidens** Cope. Type.
Lower jaws with nearly complete dentition, portion of left premaxillary containing three incisors and canine, associated with atlas and sternum. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 29.

=Coryphodon latidens.

1119. **Bathmodon molestus** Cope. Type.
Large portion of skull and lower jaws with complete dentition, associated with fore and hind limbs with feet, cervical vertebræ, scapula, and pelvic bones. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 597.

=Coryphodon molestus.

2616. **Bathmodon simus** Cope. Type.
Premaxillary bone, portion of left upper jaw containing six teeth, with portions of both rami of lower jaws containing teeth. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 596.

=Coryphodon simus.

2139. **Batodon tenuis** Marsh. Type.
Imperfect lower jaw containing canine and three premolars. Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 258, pl. 11, fig. 5.

1584. **Bison crassicornis** Richardson. Plesiotype.
Left horn core and part of skull. Pleistocene. Yukon or Kotlo River, Alaska.

Lucas, Proc. U. S. Nat. Mus., XXI, 1899, pls. 73, 74.

1719. **Bison crassicornis** Richardson? Plesiotype.
Right metacarpal. Pleistocene. Yukon River, Alaska.

Lucas, Proc. U. S. Nat. Mus., XXI, 1899, pl. 83.

1989. **Bison latifrons** (Harlan). Plesiotype.
Right metacarpal. Pliocene. Peace River, Florida.

Lucas, Proc. U. S. Nat. Mus., XXI, 1899, pl. 83.

4157. **Bison occidentalis** Lucas. Type.
Cranium and horn core. Pleistocene. Fort Yukon, Alaska.

Lucas, Science (2), VIII, 1898, p. 678; Proc. U. S. Nat. Mus., XXI, 1899, p. 758, pl. 65.

2360. **Blastomeryx gemmifer** Cope. See Dicrocerus gemmifer.

4941. **Brontops dispar** Marsh. Type.
Skull and lower jaws with complete dentition. White River (Oligocene). South Dakota.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 328, text figs. 7, 8.

=Megacerops dispar.

4258. **Brontops dispar** Marsh. Paratype.
Skull. White River (Oligocene). South Dakota.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 327, text figs. 5, 6.

=Megacerops brachycephalus.

4944. **Brontops validus** Marsh. Type.
Skull. White River (Oligocene). South Dakota.

Marsh, Amer. Journ. Sci. (3), XLII, 1891, p. 269.

=Megacerops dispar.

4273. **Brontotherium hypoceras** (Cope). Plesiotype.
Skull. White River (Oligocene). Bad Lands, South Dakota.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 106, text fig. 11.

4249. **Brontotherium leidyi** Osborn. Type.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 105, text figs. 9, 10.

See Menops varians.

4256. **Brontotherium medium** (Marsh). See Titanops medius.

114. **Cænopus occidentalis** (Leidy). See Rhinoceros occidentalis and Aceratherium occidentale.

1017. **Calamodon arcamœnus** Cope. Type.
Portions of right and left mandibular ramus containing teeth, associated with fragments of incisors and two molars. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 594; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 163, pl. 42, figs. 1–5.

1014. **Calamodon arcamœnus** Cope. Paratypes.
1015. (1) Lower incisor associated with skeletal fragments; (2) portion of lower incisor. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 594; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 163, (1) pl. 41, figs. 13–17; (2) pl. 44, figs. 1–1c.

1102. **Calamodon novomehicanus** Cope. Type.
Superior incisor. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 594.

=Ectagonus novomehicanus.

1012. **Calamodon simplex** Cope. Type.
Parts of molar and lower incisor. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 593; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 166, pl. 44, figs. 3, 4.

1001. **Calamodon simplex** Cope. Paratypes.
1011. (1) Teeth including incisors and molars, associated with portions of limb bones; (2) portion of incisor. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 593; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 166, (1) pl. 43; (2) pl. 44, figs. 2–2c.

1006. **Calamodon** sp. undet.
Upper molar (worn). Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 44, figs. 6–6c.

1008. **Calamodon** sp. undet.
Part of lower incisor. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV. Pt. II, 1877, pl. 44. figs. 7–7b.

154. **Camelops kansanus** Leidy. See Megalomeryx niobrarensis
155. and Procamelus? niobrarensis.

127. **Canis (Epicyon) haydeni** Leidy. Type.
Part of right ramus of jaw containing two premolars, p_3, p_4, and sectorial (m_1). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 21; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 30, pl. 1, fig. 10.

=Ælurodon haydeni.

128. **Canis sævus** Leidy. Type.
Part of left ramus of jaw containing two molars, m_1, m_2. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 21; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 28, 368, pl. 1, fig. 9.

=Ælurodon sævus.

768. **Canis temerarius** Leidy. Type.
Part of upper jaw containing part of sectorial and m^1, and fragment of lower jaw containing sectorial (m_1). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 21; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 29, 368, pl. 1, fig. 12.

2040. **Canis ursinus** Cope. Type.
Right lower jaw containing m_2, fragment of sectorial, and fragments of all the canines and premolars. "Loup Fork" (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 256; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 304, pl. 69, figs. 1, 1c.

=Ælurodon ursinus.

126. **Canis vafer** Leidy. Type.
Right and left rami of jaw containing nearly all the teeth. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 21; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 29, 368, pl. 1, fig. 11.

1181. **Castor (Eucastor) tortus** Leidy. Type.
Anterior part of upper jaw containing p^4, m^1, and m^2 of both sides and broken incisors. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 23; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 341, pl. 26, figs. 21, 22 (as Castor tortus).

=Dipoides tortus.

149. **Cervus warreni** Leidy. Cotypes.
794. (1) Antler. (2) Fragment of left lower jaw containing four teeth, p_4–m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 23; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 172, 379, pl. 27, fig. 12.

(1)=Merycodus necatus Leidy.
(2)=Palæomeryx sp. undet. (fide J. W. Gidley).

2132. **Cimolodon agilis** Marsh. Type.
Penultimate left lower molar in jaw. Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 255, pl. 6, fig. 8.

=Cimolomys agilis.

2132. **Cimolomys agilis** (Marsh). See Cimolodon agilis.

2878. **Cimolomys anceps** (Marsh). See Oracodon anceps.

2140. **Cimolomys gracilis** Marsh. Type.
Upper molar. Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXVIII, 1889, p. 84, pl. 2, figs. 1-4.

1121. **Coryphodon cuspidatus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 206, pl. 46, fig. 1.

See Bathmodon cuspidatus.

111. **Coryphodon elephantopus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 217, pl. 50, figs, 5, 6; pls. 51–54, fig. 1.—Osborn, Bull. Amer. Mus. Nat. Hist., X, 1898, p. 196, text fig. 19; p. 200, text fig.

See Bathmodon elephantopus.

2615. **Coryphodon elephantopus** (Cope). Plesiotype.

Left premaxillary. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 217, pl. 50, fig. 7.

2614. **Coryphodon latidens** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 214, pls. 48–50, figs. 1–4.

See Bathmodon latidens.

1119. **Coryphodon molestus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 229, pls. 56, 57, figs. 1, 2.

See Bathmodon molestus.

2610. **Coryphodon obliquus** Cope. Type.

Fragments of lower jaw with last two molars and canine. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 207, pl. 47, figs. 1–3.

1032. **Coryphodon radians** (Cope). Plesiotypes.
1034. (1) Lower teeth associated with skull and jaw fragments;
2611. (2) upper and lower teeth; (3) lower molar, m_1, upper premolar, p^4, and lower canine and incisor. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 211, pl. 47, (1) figs. 11–13; (2) figs. 4–6; (3) figs. 7–10.

2616. **Coryphodon simus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 225, pl. 55, figs. 1–4.

See Bathmodon simus.

2617. **Coryphodon simus** (Cope). Plesiotype.

Portion of right lower jaw containing two teeth, p_4 and m_1, associated with fragments of limb bones. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 225, pl. 55, figs. 5–10.

2621. **Coryphodon No. I** Cope.

Portions of atlas, scapula, ulna, and radius, associated with two carpals and two metacarpals. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 237, pl. 57, figs. 3–7, pl. 58, figs. 1–7.

2622. **Coryphodon No. II** Cope.
Fragments of skeleton including many foot bones. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 241, pl. 58, fig. 9; pl. 59; pl. 60, figs. 1–12.

2623. **Coryphodon No. III** Cope.
Nearly complete right fore foot, portions of radius and ulna, centra of vertebra, and other fragments. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 247, pl. 61, figs. 1–15.—Osborn and Wortman, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 121, fig. 14.

2036. **Coryphodon No. IV** Cope.
Lumbar vertebræ, astragalus, and fragments of femur and humerus. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 248, pl. 62; pl. 63, figs. 1–4.

2619. **Coryphodon** sp. undet.
Portion of scapula. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 63, fig. 5.

5415. **Coryphodon** sp. undet.
Right ilium and ischium. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 64, figs. 1, 2.

2037. **Coryphodon** sp. undet.
Right femur. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 64, fig. 4.

2626. **Coryphodon** sp. undet.
Distal end of radius associated with jaw and other skeletal fragments. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 64, fig. 5.

2625. **Coryphodon** sp. undet.
Distal end of radius associated with other skeleton fragments. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 64, fig. 6.

2620. **Coryphodon** sp. undet.
Portion of scapula. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 63, fig. 6.

2627. **Coryphodon** sp. undet.
Scaphoid. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 61, fig. 16.

2038. **Coryphodon** sp. undet.
Calcaneum and astragalus. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 60, fig. 13.—Osborn, Bull. Amer. Mus. Nat. Hist., X, 1898, p. 211, text fig. 26 A–C.

2639. **Coryphodon** sp. undet.
Tibia. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 54, fig. 4.

148. **Cosoryx furcatus** Leidy. Type.
Portion of antler. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 173, pl. 28, fig. 8.

=Merycodus furcatus.

5390. **Cosoryx ramosus** Cope. Type.
Portion of lower jaw containing five teeth, p_3–m_3. Santa Fe (Miocene). New Mexico.

Cope, Pal. Bull., No. 18, 1874, p. 148; Proc. Acad. Nat. Sci. Phila., XII, 1874, p. 148.

=Merycodus ramosus.
See Dicrocerus necatus.

2044. **Cosoryx teres** Cope. Type.
Frontal bone with portions of both antlers. "Loup Fork" (Miocene). Valley of the Rio Grande.

Cope, Proc. Acad. Nat. Sci. Phila, 1874, p. 150.

=Palæomeryx teres.
See Dicrocerus teres.

1125. **Creodus incertæ sedis No. I** Cope.
Portion of left lower jaw without teeth, associated with skeleton bones, including portions of vertebræ, end of scapula, and portions of humerus, ilia, femora, and tibia. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 127, pl. 37, Figs. 23–31.

1123. **Creodus incertæ sedis No. II** Cope.
Upper molar (?m^1), associated with bones of skeleton, including three cervical vertebræ, two dorsal vertebræ, two caudal vertebræ, parts of both humeri, and parts of radii and ulnæ. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 129, pl. 37, figs. 10–22.

2684. **Ctenacodon potens** Marsh. Paratype.
Left lower jaw containing teeth. Morrison (Jurassic). Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 333, pl. 8, figs. 7–9.

658. **Daphœnus vetus** Leidy. Type.
Posterior portion of cranium, fragment of left upper jaw containing posterior three molars, part of left lower jaw containing three molars (m_1–m_3) and fangs of last premolar, and right lower sectorial in fragment of jaw. White River (Oligocene). South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., VI, 1853, p. 393.

See Amphicyon vetus.

1098. **Diacodon alticuspis** Cope. Type.
Right lower jaw containing one premolar (p_4) and three molars (m_1–m_3), associated with upper premolar. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Eocene New Mexico, 1875, p. 12; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 132, pl. 45, fig. 19.

1126. **Diacodon celatus** Cope. Type.
Left lower jaw containing last three molars. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 12; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 133, pl. 45, fig. 20.

525. **Dicotyles** sp. undet.
Upper canine. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 200, pl. 28, fig. 3.

1036. **Dicrocerus furcatus** (Leidy). Plesiotype.
Portions of both lower jaws containing p_4 and all the molars of both sides and left p_3. "Loup Fork" (Miocene). Valley of the Rio Grande.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 350, pl. 82, figs. 1, 1a.

=Merycodus furcatus.

1144. **Dicrocerus furcatus** (Leidy). Plesiotypes.
1146 to 1150. 2046.
Portions of antlers of various individuals. "Loup Fork" (Miocene). Valley of the Rio Grande.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p, 350, pl. 80, figs. 1–7; pl. 81, figs. 1, 1a.

=Merycodus furcatus.

2360. **Dicrocerus gemmifer** (Cope). Plesiotype.
Last right lower molar, m_3, in fragment of jaw. "Loup Fork" (Miocene). Near Santa Fe, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 360, pl. 82, figs. 13, 13a.

=Blastomeryx gemmifer.

5390. **Dicrocerus necatus** (Leidy). Plesiotype.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 356, pl. 82, fig. 5.

=Merycodus ramosus.
See Cosoryx ramosus.

2029. **Dicrocerus necatus** (Leidy). Plesiotypes.
2032. (1) Right and left antlers complete and fragment of left
2033. lower jaw containing three teeth; (2) portion of right antler; (3) portion of right antler with portion of frontal bone. "Loup Fork" (Miocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 353; (1) pl. 81, figs. 2, 3; pl. 82, fig. 2; (2) pl. 81, fig. 6; (3) pl. 81, fig. 5.

=Merycodus necatus.

2030. **Dicrocerus necatus** (Leidy). Plesiotype.
Fragment of lower jaw containing last molar and distal end of metapodial; portion of left upper maxillary containing three teeth, p^4–m^2 and part of m^3; portion of right antler. "Loup Fork" (Miocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 353, pl. 81, fig. 4; pl. 82, figs. 3, 4.

=Merycodus necatus.

1035. **Dicrocerus tehuanus** Cope. Type.
Right lower jaw with three premolars (p_2–p_4) and one molar (m_1). "Loup Fork" (Miocene). Valley of the Rio Grande.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 359, pl. 82, fig. 10.

=Merycodus tehuanus.

1037. **Dicrocerus tehuanus** Cope? Paratypes.
5391. (1) Portion of left lower jaw containing three teeth, p_4–m_3; (2) portion of right lower jaw containing four teeth, p_4 to m_3. "Loup Fork" (Miocene). Valley of the Rio Grande, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV., Pt. II, 1877, p. 359, pl. 82, (1) fig. 11, (2) fig. 12.

=Merycodus tehuanus.

2044. **Dicrocerus teres** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pp. 347, 356, pl. 81, fig. 7, pl. 82, figs. 6, 6a.

=Palæomeryx teres (fide J. W. Gidley).
See Cosoryx teres.

1031. **Dicrocerus trilateralis** Cope. Type.
1145. Portions of pelvis, sternum, and fragment of horn, associated with portions of the mandible containing teeth and fragments of ribs. "Loup Fork" (Miocene). Valley of the Rio Grande.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 357, pl. 81, fig. 8, pl. 82, figs. 7–9.

=? Merycodus trilateralis.

2880. **Didelphops comptus** (Marsh). Plesiotypes.
2881. Right upper molar and exterior portion of right upper premolar. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, pl. 10, figs. 1, 2.

2883. **Didelphops ferox** (Marsh). Plesiotype.
Right lower jaw. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, pl. 9, figs. 7, 8.

2882. **Didelphops** sp. undet.
Lower molar. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3) XLIII, 1892, pl. 11, fig. 9.

1092. **Didymictis protenus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV., Pt. II, 1877, p. 123, pl. 39, figs. 2–6.

=Viverravus protenus.
See Limnocyon protenus.

1088 to 1091. **Didymictis protenus** (Cope). Plesiotypes.
(1) Portion of left lower molar; (2) left lower jaw containing five teeth, p_3–m_3; (3) right lower jaw containing last molar; (4) portion of left lower jaw containing last molar. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 123, pl. 39, (1) fig. 9; (2) fig. 1, 1a; (3) fig. 8; (4) figs. 7–7b.

=Viverravus protenus.

3957. **Dinictis major** Lucas. Type.
Skull and lower jaws with portions of skeleton. Lower Miocene. Bird Cage Gap, Bad Lands of Western Nebraska.

Lucas, Amer. Journ. Sci. (4), VI, 1898, p. 399.

4212. **Dinoceras distans** Marsh. Plesiotype.
Top of cranium. Eocene. Barrel Springs, Wyoming.

Marsh, Mon. X, U. S. Geol. Surv., 1886, p. 14, fig. 4, p. 15, fig. 8.

1181. **Dipoides tortus** (Leidy). See Castor (Eucastor) tortus.

2727. **Dryolestes vorax** Marsh. Type.
Nearly complete lower jaw with teeth. Morrison (Jurassic). Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XVIII, 1879, p. 215; XXXIII, 1887, pl. 9, figs. 3, 4.

1137. **Ectagonus gliriformis** Cope. Type.
Portions of teeth associated with other fragments. Eocene. New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y. War, II, Pt. II, 1874, p 592; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 160, pl. 41, figs. 1–7.

1102. **Ectagonus novomehicanus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 159, pl. 40, figs. 34–39.

See Calamodon novomehicanus.

189. **Elephas columbi** Falconer. Plesiotype.
Left ramus. Pliocene. Peace Creek, Florida.

Leidy, Trans. Wagner Free Inst. Sci. Phila., II, 1889, pl. 8, fig. 2.

185. **Elephas imperator** Leidy. Type.
Fifth upper molar. Pliocene. Nebraska River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 10; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 255, pl. 25, fig. 3.

146. **Elotherium mortoni** (Leidy). See Archæotherium mortoni.

524. **Elotherium mortoni** (Leidy)? Plesiotype.
Incisor tooth. White River (Oligocene). Twenty miles southeast of Cheyenne, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pl. 7, figs. 28, 29.

783. **Elotherium mortoni.** See Arctodon sp. undet. and Archæotherium robustum.

2129. **Ennacodon affinis** (Marsh). See Enneodon affinis.

2130. **Ennacodon crassus** (Marsh). See Enneodon crassus.

2129. **Enneodon affinis** Marsh. Type.
Left ramus of jaw. Morrison (Jurassic.) Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 339.

=Ennacodon affinis.

2130. **Enneodon crassus** Marsh. Type.
Right ramus of jaw containing seven teeth. Morrison. (Jurassic.) Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 339, pl. 10, fig. 4.

=Ennacodon crassus.

1079. **Eohippus angustidens** (Cope). See Orohippus angustidens and Hyracotherium angustidens.

1060. **Eohippus index** (Cope). See Hyracotherium angustidens
1080. and Orohippus angustidens.
1081.
1087.

1128. **Eohippus lœvii** (Cope). See Orotherium lœvii.

667. **Equus excelsus** Leidy. Type.
Fragment of right maxillary containing four teeth, p^4–m^3. Pleistocene. Niobrara River, near Hay Springs, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 266, 400, pl. 21, fig. 31.

666. **Equus excelsus** Leidy. Plesiotype.
Last lower molars of right side m_2, m_3. Pleistocene. Pawnee Loup of Platte River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 268, pl. 29, fig. 39.

619. **Equus (Protohippus) perditus** Leidy. Type.
Part of jaw and four upper teeth (p^4–m^3). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26.

=Protohippus perditus.

1180. **Erethizon venustus** (Leidy). See Hystrix (Hystricops) venustus.

1104. **Esthonyx acer** Cope. Type.
Portion of right lower jaw containing four teeth, p_4–m_3. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief of Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 594.

=Esthonyx bisulcatus.

1103. **Esthonyx bisulcatus** Cope. Type.
Lower jaw containing three molars, associated with two incisors. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 594; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 154, pl. 40, fig. 27–30.

1104. **Esthonyx bisulcatus** Cope. Plesiotype.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 154, pl. 40, figs. 31–31b.

See Esthonyx acer.

1130. **Esthonyx bisulcatus** Cope. Plesiotypes.
5376. (1) Lower molar of left side; (2) fragment of right lower jaw containing one molar. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 154, pl. 40, (1) fig. 33; (2) fig. 32, 32a.

1105. **Esthonyx burmeisteri** Cope. Type.
Right lower jaw containing last molar. Wasatch (Eocene). New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 595; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 156, pl. 40, fig. 26.

1024. **Eumys loxodon** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 300, pl. 69, fig. 15.

=Peromyscus loxodon.
See Hesperomys loxodon.

3288. **Eusyodon maximus** Leidy. Type.
Imperfect lower canine. Pliocene. Williston, Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1886, p. 37, text figs. 1, 2.

=Teleoceras fossiger.

125. **Felis augustus** Leidy. Type.
Upper sectorial and p^3 in fragment of maxillary. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1872, p. 39; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 227, 315, pl. 7, fig. 19.

147. **Felis augustus** Leidy. Paratypes.
5448. (1) Distal end of right humerus; (2) premaxillary containing upper incisor. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1872, p. 39; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 227, 315 (1), pl. 20, fig. 24; (2) pl. 7, fig. 18.

875. **Graphiodon vinearius** Leidy. Type.
Tooth. Miocene. Gay Head, Martha's Vineyard, Massachusetts.

Leidy, Proc. Acad. Nat. Sci., Phila., 1870, p. 122; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 337, pl. 22, fig. 7.

1106. **Heptodon singularis** (Cope). See Hyrachyus singularis.

1024. **Hesperomys loxodon** Cope. Type.
Right lower jaw containing three molars. "Loup Fork" (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1874, p. 150.

=Peromyscus loxodon.
See Eumys loxodon.

584. **Hipparion affine** Leidy. Type.
Upper molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 286, 402, pl. 18, figs. 20–23.

=Neohipparion affine.

585. **Hipparion affine** Leidy. Paratype.
Last upper molar, m^3, of left side. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 286, 402, pl. 18, fig. 24.

=Neohipparion affine.

562. **Hipparion affine** Leidy? Plesiotype.
Series of lower teeth of right side, p_2 to m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 317, pl. 19, fig. 3.

=Neohipparion affine?

587. **Hipparion gratum** Leidy. Cotypes.
5445 to 5447. (1) Right upper premolar, p^2, associated with last upper molar; (2) right upper molar, ?m^0; (3) right and left last upper molars; (4) right upper molar, ?m^1. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Jour. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 287, pl. 18, figs. (1) 25, 26; (2) 27; (3) 28, 29; (4) 30.

=Neohipparion gratum.

624. **Hipparion gratum** Leidy? Plesiotype.
Series of lower teeth of right side, p_2–m_2. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 318, pl. 19, fig. 6.

=Neohipparion gratum?

3306. **Hipparion ingenuum** (Leidy). See Hippotherium ingenuum
3308. and Hippotherium gratum.
3326.

3292. **Hipparion plicatile** (Leidy). See Hippotherium plicatile. (Also catalogue numbers 3293–3398, 3309, 3315, 3317, 3319.)

588. **Hipparion speciosum** Leidy. Plesiotypes.
590. (1) Four upper teeth, p^2–p^1 of left side and p^3 of right side; (2) three upper cheek teeth of left side, p^2, p^3, and m^2; (3) three upper cheek teeth of right side. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 282–285, pl. 18, (1) figs, 7–10; (2) figs. 6, 11, 12; (3) figs. 13–15.

589. **Hipparion speciosum** Leidy? Plesiotype.
Series of lower teeth of right side, p_2–m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 318. pl. 19, fig. 4.

598. **Hipparion speciosum** Leidy. Plesiotypes.
Four isolated molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 320, pl. 19, figs. 19–22.

2573. **Hipparion speciosum** Leidy. See Hippotherium speciosum.

601. **Hipparion** sp. undet.
Various lower molars of different individuals. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 322, pl. 19, figs. 30–36.

599. **Hipparion** sp. undet.
Three upper milk molars, all of right side (three individuals). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 289, pl. 18, figs. 34–36.

=Neohipparion sp. undet.

596. **Hipparion** sp. undet.
Two upper teeth, m^2 right, and p^3 or p^4, left. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 18, figs. 21, 33.

=Neohipparion sp. undet.

574. **Hipparion** sp. undet.
575. Second and fourth upper milk molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 291, pl. 18, figs. 37, 38.

=Neohipparion sp. undet.

3757. **Hipposyus formosus** Leidy. Type.
First and second upper left molars. Bridger (Eocene). Near Fort Bridger, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1872, p. 37; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 90, pl. 6, fig. 41.

3750. **Hipposyus robustior** (Leidy). Type.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 93, pl. 6, fig. 40.

See Notharctus robustior.

2572. **Hippotherium calamarium** Cope. Type.
Palate with teeth and fragments of lower jaw. Middle Miocene. Pojuaque, near Santa Fé, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 259; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 321, pl. 75, figs. 1, 2, 2a.

=Merychippus calamarium.

3306. **Hippotherium gratum** Leidy. Plesiotype.

Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, Pt. II, 1896, p. 49, pl. 19, figs. 9, 10.

=Hipparion ingenuum.
See Hippotherium ingenuum.

3308. **Hippotherium gratum** (Leidy). Plesiotypes.
3326.

Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 49, pl. 18, figs. 15, 16.

=Hipparion ingenuum.
See Hippotherium ingenuum.

3306. **Hippotherium ingenuum** Leidy. Type.
Second upper molar, associated with last upper molar. Pliocene. Archer, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1885, p. 33, text fig.; Trans. Wagner Free Inst. Sci. Phila., II, 1889, pp. 20, 21, text fig., pl. 3, fig. 3.

=Hipparion ingenuum.
See Hippotherium gratum.

3308. **Hippotherium ingenuum** Leidy. Plesiotypes.
3326. (1) Proximal phalanx; (2) left astragalus. Pliocene. (1) Peace Creek, Florida; (2) Archer, Florida.

Leidy, Trans. Wagner Free Inst. Sci. Phila., II, 1889, p. 20, pl. 3, (1) fig. 2; (2) fig. 4.

=Hipparion ingenuum.
See Hippotherium gratum.

3304. **Hippotherium montezumæ** Leidy. Type.
Upper molar. Santa Fe marls (Upper Miocene). Lacualtipan, Hidalgo, Mexico.

Leidy, Proc. Acad. Nat. Sci. Phila., 1882, p. 291, text fig.; Trans. Wagner Free Inst. Sci. Phila., II, 1889, pp. 21, 22, text fig., pl. 5, fig. 10.

=Neohipparion montezumæ.

3302. **Hippotherium montezumæ** Leidy. Paratypes.
3303. (1) Proximal end of metatarsal, (2) proximal end of first phalanx. Santa Fe marls (Upper Miocene). Lacualtipan, Hidalgo, Mexico.

Leidy, Proc. Acad. Nat. Sci. Phila., 1882, p. 291; Trans. Wagner Free Inst. Sci. Phila., II, 1889, p. 21, pl. 5, (1) figs. 5, 6; (2) fig. 7.

=Neohipparion montezumæ.

3292. **Hippotherium plicatile** Leidy. Type.
Upper right molar. Pliocene. Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1887, p. 309, text fig.—Cope, Proc. Amer. Philos. Soc., 1889, p. 444, fig. 6.—Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 50, pl. 19, figs. 1, 2.

=Hipparion plicatile.

3309. **Hippotherium plicatile** Leidy. Paratype.
Three lower molars. Pliocene. Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1887, p. 309.

=Hipparion plicatile.

3315. **Hippotherium plicatile** Leidy. Plesiotypes.
3317. (1) Left metatarsal; (2) proximal phalanx; (3) astragalus;
3319. (4) right radius; (5) left radius and ulna; (6) right
3293 tibia; (7) metatarsal; (8) proximal end of metacarpal;
to (9) proximal median phalanx of fore foot. Pliocene.
3298. Levy County, Florida.

Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 50, pl. 18, (1) fig. 12; (2) fig. 11; (3) fig. 14; (4) pl. 19, fig. 3; (5) fig. 4; (6) fig. 5; (7) fig. 6; (8) pl. 18, fig. 13; pl. 19, fig. 7; (9) pl. 19, fig. 8.

=Hipparion plicatile.

3299. **Hippotherium princeps** Leidy. Type.
Third upper right premolar. Pliocene. Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1890, p. 182.—Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 49, pl. 19, figs. 12, 13.

=Neohipparion princeps.

2573. **Hippotherium speciosum** (Leidy). Plesiotype.
Fragment of upper jaw containing five teeth, p^3–m^3. Middle Miocene. Pojuaque, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 322, pl. 75, figs. 3, 3a.

=Hipparion speciosum.

151. **Homocamelus caninus** Leidy. Type.
Portions of anterior part of cranium containing incisor, canine, and three premolars, p^1–p^3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 158. pl. 14, figs. 16, 17.

=Procamelus occidentalis.

99. **Hoplophoneus primævus** (Leidy and Owen). See Machairodus primævus.

134. **Hyænodon cruentus** Leidy. Type.
Portion of left lower jaw containing broken canine, two premolars (p_3, p_4) and last molar (m_3). White River (Oligocene). White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., VI, 1853, p. 393; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 47, 369, pl. 5, figs. 10, 11.

144. **Hyænodon horridus** Leidy. Type.
Skull and lower jaw containing nearly complete dentition. White River (Oligocene). White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1853, p. 392; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 39, 369, pl. 3.

1176. **Hyopsodus paulus** Leidy. Type.
Part of right lower jaw containing three molars (m_1–m_3). Eocene. Smiths Fork, Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 110; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 75, 320, pl. 6, figs. 1, 2.

573. **Hypohippus affinis** (Leidy). Type.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 311, 402, pl. 21, figs. 11, 12.

See Anchitherium (Hypohippus) affinis.

110. **Hyrachyus agrarius** Leidy. Type.

Left ramus of jaw without teeth. Bridger (Eocene). Smiths Fork, Green River, Wyoming.

Leidy, Prel. Rept. Geol. Surv. Wyoming, etc., 1871, p. 357; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 60, 327, pl. 2, fig. 11.

660. **Hyrachyus agrarius** Leidy. Plesiotype.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 60, 327, pl. 2, fig. 12 (originally described as H. agrestis).

See Hyrachyus agrestis.

660. **Hyrachyus agrestis** Leidy. Type.

Portion of left lower jaw containing three teeth, dp_1, dp_4, m_1. Bridger (Eocene). Blacks Fork, Green River, Wyoming.

Leidy, Prel. Rept. Geol. Surv. Wyoming, etc., 1871, p. 357.

= Hyrachyus agrarius.

661. **Hyrachyus modestus** (Leidy). Type.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 67, pl. 2, fig. 13.

See Lophiodon modestus.

1106. **Hyrachyus singularis** Cope. Type.

Right maxillary bone containing two premolars (p^3, p^4), and three molars (m^1–m^3), associated with part of maxillary of opposite side containing p^4–m^3. Wind River (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 19; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 267, pl. 66, fig. 17.

=Heptodon singularis.

138. **Hyracodon nebrascensis** (Leidy). Type and paratype.

139. Leidy, Proc. Acad. Nat. Sci. Phila., 1856, p. 92.

See Rhinocerous nebrascensis and Aceratherium nebrascensis.

1079. **Hyracotherium angustidens** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 265, pl. 66, figs. 3, 3a.

=Eohippus angustidens.

See Orohippus angustidens.

1060. **Hyracotherium angustidens** (Cope). Plesiotypes.
1080. (1) Portion of left lower jaw containing three molars, m_1–m_3,
1081. associated with upper jaw containing teeth of both sides;
1087. (2) last two upper molars of right side, m^2 and m^3; (3) portion of left lower jaw containing two premolars, p_3 and p_4; (4) fragment of left lower jaw containing three teeth, p_4, m_1, and part of m_2. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 265, pl. 66, (1) figs. 1, 2; (2) figs. 4, 4a; (3) fig. 5; (4) fig. 6.

=Eohippus index.

1002. **Hyracotherium (Pliolophus) cristonense** (Cope). Type.

Wortman, Bull. Amer. Mus. Nat. Hist., VIII, 1896, p. 102, text fig. 11, pl. 2, fig. 1.

=Orotherium cristonense.

1077. **Hyracotherium cuspidatum** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pp. 262, 267, pl. 65, fig. 18.

=Orohippus cuspidatus.

1064. **Hyracotherium tapirinum** (Cope). Cotypes.
1076. Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877,
1086. p. 263, pl. 66, figs 12–16.

=Orohippus tapirinus.

1057. **Hyracotherium vasacciensis** (Cope). Plesiotypes.
1073. Cope, Rept. U. S Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877,
1074. p. 264, pl. 66, figs. 7–11.

=Orohippus vasacciensis.

1180. **Hystrix (Hystricops) venustus** Leidy. Type.
Two molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 22; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 343, 407, pl. 26, figs. 23, 24.

=Erethizon venustus.

2142. **Laodon venustus** Marsh. Type.
Left lower jaw containing three premolars and six molars. Morrison (Jurassic). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 337, pl. 9, fig. 5.

157. **Leptomeryx evansi** Leidy. Type.
Imperfect cranium, part of right ramus. White River (Oligocene). White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1853, p. 394; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 165, 383, pl. 14, figs. 1–8.

1092. **Limnocyon protenus** Cope. Type.
Portions of both lower jaws containing teeth, associated with portion of ilium, end of tibia, right astragalus, distal end of radius, and fragments. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 608.

=Viverravus protenus.
See Didymictis protenus.

661. **Lophiodon modestus** Leidy. Type.
Left upper molar. Bridger (Eocene). Smiths Fork, Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 109; ibid., 1872, p. 20.

= Hyrachyus modestus.

3753. **Lophiotherium sylvaticum** Leidy. Type.
Fragments of left side of lower jaw containing one premolar (p_4) and two molars (m_1, m_3). Bridger (Eocene). Henrys Fork, Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 126; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 69, 327, pl. 6, figs. 33–35.

=Orohippus sylvaticus.

662. **Lutra piscinaria** Leidy. Type.
Right tibia. Pliocene. Sinker Creek, Idaho.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 230, pl. 31, fig. 4.

115178. **Lutreola macrodon** Prentiss. Type.
Portion of skull. Pleistocene. Brooklin, Hancock County, Maine.

Prentiss, Proc. U. S. Nat. Mus., XXVI, 1903, p. 887, text fig. a.

99. **Machiarodus primævus** Leidy and Owen. Type.
Cranium and broken jaw. White River (Oligocene). Bad Lands, South Dakota.

Leidy and Owen, Proc. Acad. Nat. Sci. Phila., 1851, p. 329.—Leidy, Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 354, pl. 12a, fig. 5; Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, pp. 95, 115, pl. 18, figs. 1–3.

=Hoplophoneus primævus.

1038. **Martes nambianus** Cope. Type.
Fragment of lower jaw containing two premolars (p_3, p_4) and sectorial (m_1). Santa Fé marls (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1874, p. 147.

=Putorius nambianus.
See Mustela nambianus.

184. **Mastodon andium** Cuvier. Plesiotype.
Portion of jaw and symphysis containing parts of three teeth. Pleistocene. Chile.

Wyman, U. S. Naval Astr. Exped. to Southern Hemisphere, II, 1855, pl. 12, figs. 1, 2.

3066. **Mastodon floridanus** Leidy. Type.
Posterior portion of last left lower molar, associated with first and second left upper molars, probably of the same individual. Pliocene. Williston, Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1886, p. 11.—Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 15, pl. 1, figs. 1, 3; pl. 5, fig. 4.

3057. **Mastodon floridanus** Leidy. Plesiotypes.
Teeth of various individuals. Pliocene. Williston, Levy County, Florida.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 15, pls. 1–7.

(See also catalogue numbers 3058–3065, 3067, 3069–3081, 3083–3085, 3101, 3110, 3115.)

209. **Mastodon mirificus** Leidy. Type.
Portion of left lower jaw containing last molar. Loup Fork (Upper Miocene). Fort Niobrara, Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 10; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 249, 396, pl. 25, figs. 1, 2.

426. **Mastodon obscurus** Leidy. Type.
Posterior half of last molar. Pliocene? Tarboro, North Carolina.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 247, 396, pl. 27, fig. 16.

2346. **Mastodon productus** Cope. Type.
Nearly complete lower jaws containing fifth and sixth molars of each side and two tusks. "Loup Fork" (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1874, p. 221; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 306, pl. 70, figs. 1, 2; pl. 71, fig. 3.

4168 to 4173. 4179. **Mastodon productus** Cope. Plesiotypes.
Teeth and bones of various individuals. "Loup Fork" (Miocene). Near Ildefonso, New Mexico.

Cope, Rept. U. S. Georgr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 306, pl. 71, figs, 1, 2, 4–9; pl. 72, figs. 2–2d.

4261. **Megacerops brachycephalus** Osborn. Type.
Skull. White River (Oligocene). Bad Lands, between Cheyenne and White rivers, South Dakota.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 97.

4258. **Megacerops brachycephalus** Osborn. Paratype.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 97, text figs. 3, 4.

See Brontops dispar.

4941. **Megacerops dispar** (Marsh). Type.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 98.

See Brontops dispar.

4944. **Megacerops dispar** (Marsh). See Brontops validus.

154. **Megalomeryx niobrarensis** Leidy. Cotypes.
155. Teeth. Loup Fork (Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 24; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 161, 382, pl. 14, figs. 12, 13.

=Camelops kansanus.
See Procamelus? niobrarensis.

830. **Megatherium mirabile** Leidy. Cotypes.
832. Anterior part of jaw, posterior part of cranium, and astraga-
837. lus. Pleistocene. Skiddaway Island, Georgia.

Leidy, Proc. Acad. Nat. Sci. Phila., VI, 1852, p. 117; Smithsonian Contrib. to Knowl., VII, Art. V, 1855, p. 49, pl. 15.

2131. **Menacodon rarus** Marsh. Type.
Left ramus of jaw with four premolars and three molars. Morrison (Jurassic). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 340, pl. 10, fig. 5.

2885. **Meniscoëssus cœlatus** (Marsh). See Tripriodon cœlatus.

1093. **Meniscotherium chamense** Cope. Type.
Part of upper right maxillary containing one broken premolar (p^4), and three molars (m^1–m^3). Eocene. New Mexico.

Cope, App. FF_3 Ann. Rept. Chief Engineers, in Rept. Sect'y. War, II, Pt. II, 1874, p. 596; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 252, pl. 66, fig. 18.

4249. **Menops varians** Marsh. Paratype.
Skull. Lower beds, White River (Oligocene). Bad Lands, between Cheyenne and White rivers, South Dakota.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 329, text fig. 10.

=Brontotherium leidyi.

2572. **Merychippus calamarium** (Cope). See Hippotherium calamarium.

578. **Merychippus insignis** Leidy. Plesiotypes.
583. (1) Two upper molars, m^2 and m^3, of right side; (2) fragment of maxillary of right side containing six teeth, p^2–m^3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 296, (1) pl. 18, figs. 49, 50; (2) pl. 17, fig. 5.

569. **Merychippus mirabilis** Leidy. Type.
Upper milk molars (dp^3, dp^4) and first molar (m^1). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 27; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 299, pl. 17, figs. 10–13.

=Protohippus mirabilis.

580. **Merychippus mirabilis** Leidy. Paratype.
Portion of right maxillary containing four teeth p^4–m^3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 27; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 299, pl. 17, figs. 8, 9.

=Protohippus mirabilis.

571. **Merychippus mirabilis** Leidy. Plesiotypes.
572. (1) Last right upper molar, m^3; (2) last upper molar of left
581. side; (3) two upper premolars of right side, p^3 and p^3;
582. (4) right upper premolar, p^2. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 299, (1) pl. 18, fig. 55; (2) fig. 56; (3) pl. 17, fig. 14; (4) fig. 15.

=Protohippus mirabilis.

2574. [**Merychippus** sp. undet.]
Fragment of right lower jaw with five teeth, p_3–m_3. Middle Miocene. Pojuaque, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 75, figs. 4, 5 (unnamed).

[Identified by J. W. Gidley.]

120. **Merychyus elegans** Leidy. Cotypes.
121. Right and left upper and lower jaws containing almost complete dentition. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 25; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 118, 380, pl. 11, figs. 1–11.

439. **Merychyus major** Leidy. Type.
Part of right upper jaw containing third and fourth premolars and first and second molar. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 121, 380, pl. 11, figs. 15, 16.

118. **Merychyus medius** Leidy. Type.
Fragment of left side of lower jaw containing three molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 26; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 119, 121, 380, pl. 11, figs. 12–14.

156. **Merycochœrus proprius** Leidy. Type.
Upper and lower jaws containing nearly complete dentition. Lower Miocene. Near Fort Laramie, Niobrara River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 24; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 110, 380, pl. 10, figs. 1–4.

445. **Merycochœrus proprius** Leidy. Paratype.
Last left upper molar. Lower Miocene. Near Fort Laramie, Niobrara River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 24; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 110, 380, pl. 10, fig. 5.

145. **Merycochœrus rusticus** Leidy. Type.
Portion of cranium and lower jaw of left side containing complete dentition. Pliocene. Sweetwater River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 109; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 199, 319, pl. 3, figs. 1–3.

442. **Merycochœrus rusticus** Leidy. Paratypes.
532. Various teeth and bones of skeletons. Miocene. Sweet-
535–537. water River, Wyoming.
913.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 109; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 199, 319, pl. 7, figs. 1–5; pl. 20, figs. 9–11, 15.

530. **Merycochœrus** sp. undet.?
Distal end of tibia. Pliocene. Sweetwater River, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 208, pl. 20, fig. 12

148. **Merycodus furcatus** (Leidy). See Cosoryx furcatus.

1036. **Merycodus furcatus** (Leidy). See Dicrocerus furcatus.
(Also catalogue numbers 1144, 1146–1150, 2046.)

5385. **Merycodus necatus** Leidy. Plesiotype.
435. Right side of lower jaw containing five teeth, p_3–m_3; first premolar. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 162, pl. 14, figs. 9, 10.

149. **Merycodus necatus** Leidy. See Cervus warreni.

2029 **Merycodus necatus** Leidy. See Dicrocerus necatus.
to
2033.

5390. **Merycodus ramosus** (Cope). See Cosoryx ramosus and Dicrocerus necatus.

1035. **Merycodus tehuanus** (Cope). See Dicrocerus tehuanus.
400–1037.
5391.

1031. **Merycodus trilateralis** (Cope). See Dicrocerus trilateralis.
1145.

2359. **Mesohippus bairdii** (Leidy). See Palæotherium bairdii and Anchitherium bairdii.

1633. **Mesoteras kerrianus** Cope. Type.
Fragment of cranium and jaw. Miocene. Banks of Omanky Creek, Halifax County, North Carolina.

Cope, Amer. Nat., IV, 1870, p. 128.

1178. **Microsus cuspidatus** Leidy. Type.
Part of left lower jaw containing last two molars. Bridger (Eocene). Black Fork of Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 113; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 81, pl. 6, figs. 10, 11.

1038. **Mustela nambianus** (Cope). Type.

Cope, App. LL, Ann. Rept. Chief Engineers, 1875, p. 68.

=Putorius nambianus.
See Martes nambianus.

806. **Mylodon harlani** Owen. Plesiotypes.
807. (1) First upper molar; (2) first lower molar; (3) phalanx;
818. (4) tibia. Pliocene. Petite Anse Island, Louisiana.
821.

Leidy, Proc. Acad. Nat. Sci. Phila., 1885, pp. 49–51, text figs.; Trans. Wagner Free Inst. Sci. Phila., II, 1889, pp. 33–37, text figs.; pl. 5, (1) fig. 4; (2) fig. 3; (3) fig. 2; (4) fig. 1.

562. **Neohipparion affine** (Leidy)? See Hipparion affine?

584. **Neohipparion affine** (Leidy). See Hipparion affine.
585.

587. **Neohipparion gratum** (Leidy). See Hipparion gratum. (Also catalogue numbers 5445–5457.)

624. **Neohipparion gratum** (Leidy)? See Hipparion gratum?.

3302 to 3304. **Neohipparion montezumæ** (Leidy). See Hippotherium montezumæ.

3299. **Neohipparion princeps** (Leidy). See Hippotherium princeps.

574. **Neohipparion** sp. undet. See Hipparion sp. undet.

596. **Neohipparion** sp. undet. See Hipparion sp. undet.

599. **Neohipparion** sp. undet. See Hipparion sp. undet.

603. [**Neohipparion?** sp. undet.]
Miscellaneous lot of seven lower molars. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, figs. 2, 7–10 (unnamed).

[Identified by J. W. Gidley.]

605. [**Neohipparion?** sp. undet.]
Two lower milk molars, dp_3 and dp_4 of left side in a fragment of jaw, associated with milk molars of two other individuals, dp_4 left and dp_4 right. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, figs. 37, 38, 41 (unnamed).

[Identified by J. W. Gidley.]

602. [**Neohipparion** sp. undet.]
Last lower molar, m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, fig. 15 (unnamed).

[Identified by J. W. Gidley.]

600. [**Neohipparion?** sp. undet.]
Three lower teeth (representing three individuals). Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, figs. 25–27 (unnamed).

[Identified by J. W. Gidley.]

597. [**Neohipparion** sp. undet.]
Lower molar of right side. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, fig. 40 (unnamed).

[Identified by J. W. Gidley.]

3750. **Notharctus robustior** Leidy. Type.
Part of left lower jaw with second molar. Bridger (Eocene). Henrys Fork, Green River, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Montana, etc. (Hayden), 1872, p. 264.

=Hipposyus robustior.

3752. **Notharctus tenebrosus** Leidy. Type.
Nearly complete lower jaw containing all the teeth except p_1 and the incisors. Bridger (Eocene). Blacks Fork, Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 113; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 86, pl. 6, figs. 36, 37.

2878. **Oracodon anceps** Marsh. Paratype.
?Lower premolar. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 256, pl. 7, fig. 7.

=Cimolomys anceps.

2141. **Oracodon conulus** Marsh. Type.
Upper premolar. Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 256, pl. 7, fig. 8.

137. **Oreodon culbertsonii** Leidy. Plesiotype.
Cranium and jaw. White River (Oligocene). Nebraska.

Leidy, Owen's Rept. Geol Surv. Wis., Iowa, and Minn., 1852, p. 548, pl. 10, figs. 5, 6; Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 45, pl. 2, fig. 3.

2506. **Oreodon culbertsonii** Leidy. Plesiotype.
Cranium and jaw. White River (Oligocene). Nebraska.

Leidy, Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 45, pl. 2, figs. 1, 2.

136. **Oreodon gracilis** Leidy. Plesiotype.
Cranium and jaw. White River (Oligocene). Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 94, pl. 6, figs. 2, 3.

1079. **Orohippus angustidens** Cope. Type.
Portion of left lower jaw containing three molars, m_1–m_3. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 22.

=Eohippus angustidens.
See Hyracotherium angustidens.

1077. **Orohippus cuspidatus** Cope. Type.
Fragment of maxillary bone containing two molars (m^1, m^2). Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 22.

See Hyracotherium cuspidatum.

3753. **Orohippus sylvaticus** (Leidy). See Lophiotherium sylvaticus.

1064. **Orohippus tapirinus** Cope. Cotypes.
1076. Fragment of right lower jaw containing two molars, m_1, m_2,
1086. associated with jaws, teeth, and skeleton bones of various individuals. Wasatch (Eocene.) New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 20.

See Hyracotherium tapirinum.

1057. **Orohippus vasacciensis** Cope. Plesiotypes.
1073. Portions of lower and upper jaws containing teeth.
1074. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 21.

See Hyracotherium vasacciensis.

1002. **Orotherium cristonense** Cope. Type.
Both lower jaws containing nearly complete dentition. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 254, pl. 65, figs. 13, 14.

See Hyracotherium (Pliolophus) cristonense.

1128. **Orotherium lœvii** Cope. Type.
Portion of left lower jaw containing three premolars (p_2–p_4) and two molars (m_1, m_2), associated with a similar portion of the right jaw and a portion of the right maxillary containing two premolars (p^2, p^3). Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 257, pl. 65, figs. 15–17.

=Eohippus lœvii.

1005. **Orotherium vintanum** Marsh. Plesiotypes.
1100. (1) Left maxillary with three molars, m^1–m^3, and third premolar, associated with lower molars, m_2, m_3, and portions of the skeleton; (2) portion of right lower jaw containing last two molars, m_2 and m_3. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV Pt. II, 1877, p. 255, pl. 65, (1) figs. 1–11; (2) fig. 12.

1029. **Oxyæna forcipata** Cope. Type.
Both lower jaws containing most of the teeth. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 600; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 105, pl. 36, figs. 1–6.

1047. **Oxyæna forcipata** Cope. Paratypes.
1053. 1054. 1151. (1) Fragments, including a posterior portion of lower jaw containing parts of two molars, m_2 and m_3, anterior portion of left maxillary, and other skull portions; (2) left lower molar and distal end of tibia, with various other fragments; (3) fragmentary lower molars and premolars; (4) part of parietal bone. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 600; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 105, (1) pl. 35, figs. 7–12; (2) pl. 37, figs. 7, 8; (3) figs. 2–5; (4) fig. 1.

1049. **Oxyæna lupina** Cope. Type.
Left maxillary containing four teeth, p^4–m^3, portions of both lower jaws containing teeth, two canines (fragmentary), and portion of left squamosal. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 599; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 101, pl. 35, figs. 1–4.

1050. **Oxyæna lupina** Cope. Paratypes.
1142. 1143. (1) Upper and lower teeth associated with fragments of skeleton bones; (2) anterior portion of left lower jaw containing two teeth, p_4 and m_1; (3) left upper premolars, p^2–p^4, in fragment of jaw. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 599; Rept. U. S. Geogr. Surv. W 100th Merid., IV, Pt. II, 1877, p. 101, pl. 34, (1) figs. 14–32; (2) fig. 37; (3) figs. 34–36.

1041. **Oxyæna morsitans** Cope. Type.
Last three lower molars and canine. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 600; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 98, pl. 34, figs. 1–4.

1040. **Oxyæna morsitans** Cope. Paratypes.
1043. 1044. (1) Fragments of skull and limb bones; (2) portion of right maxillary containing two molars, m^1 and m^2, and bone fragments; (3) fragmentary jaw containing teeth, and limb bones. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 600; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 98, pl. 34, (1) figs. 11–13; (2) fig. 10; (3) figs. 5–9 (see No. 1055, Oxyæna sp. undet.).

1055. **Oxyæna** sp. undet.
Distal end of femur and portion of left calcaneum. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877; pl, 35, figs. 5, 6 (perhaps same individual as No. 1044, fig'd pl. 34, figs. 5–9, fide Cope).

5378. **Oxyæna** sp. undet.
Left premaxillary and anterior portion of maxillary containing roots of canine, one premolar and two incisors. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 37, fig. 9.

5379. **Oxyæna** sp. undet.
Part of ilium. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 37, figs. 6, 6a.

1096. **Pachyæna ossifraga** Cope. Type.
First upper molar. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 601; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 94, pl. 39, fig. 10.

2044. **Palæomeryx teres** (Cope). See Cosoryx teres and Dicrocerus teres.

749. **Palæomeryx** sp. undet. See Cervus warreni.

758. **Palæosyops paludosus** Leidy. Cotypes.
759. Upper molar (m^3), lower molar (m_1), and last upper pre-
762. molar (p^4). Bridger (Eocene). Church Buttes, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 111; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 28, 325, pl. 5, fig. 5; pl. 23, figs. 5, 6.

106. **Palæosyops paludosus** Leidy. Plesiotype.
Right tibia. Bridger (Eocene). Grizzly Buttes, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 43, pl. 20, fig. 1.

2359. **Palæotherium bairdii** Leidy. Type.
Part of right ramus of jaw containing five teeth. White River (Oligocene). Nebraska ?

Leidy in Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 572.

=Mesohippus bairdii.
See Anchitherium bairdii.

1095. **Panolax sanctæfidei** Cope. Type.
Four imperfect molars. "Loup Fork" (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1874, p. 151; Rept. U. S. Geogr. Surv. W. 100th Merid., IV., Pt. II, 1877, p. 296, pl. 69, figs. 16–20.

567. **Parahippus cognatus** (Leidy). Type.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 314, pl. 21, figs. 7–10.

See Anchitherium (Parahippus) cognatus.

1129. **Paramys buccatus** (Cope). See Plesiarctomys buccatus.

1127. **Paramys delicatior.** See Plesiarctomys delicatior.

1099. **Paramys delicatissimus** Leidy. See Plesiarctomys delicatissimus.

105. **Patriofelis ulta** Leidy. Type.

Portions of lower jaw containing broken molars (m_1–m_3). Bridger (Eocene). Near Fort Bridger, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 10; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 114, pl. 2, fig. 10.—Osborn and Wortman, Bull. Amer. Mus. Nat. Hist., IV, No. 1, 1892, p. 97, text fig. 4.

2143. **Paurodon valens** Marsh. Type.

Left ramus of jaw with teeth. Morrison (Jurassic). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIII, 1887, p. 342, pl. 10, fig. 7.

2877. **Pediomys elegans** Marsh. Paratype.

Portion of left lower jaw containing last molar. Ceratops (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, pl. 10, fig. 7.

1024. **Peromyscus loxodon** (Cope). See Eumys loxodon and Hesperomys loxodon.

5382. **Phenacodus omnivorus** Cope. Type.

Right upper molar, m^1. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 599; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 179, pl. 45, fig. 6.

1004. **Phenacodus primævus** Cope. Plesiotypes.
1026. 5381.

(1) Fragment of right lower jaw containing three teeth, m_1–m_3; (2) portion of left lower jaw containing four teeth, p_4–m_3, associated with five upper teeth, p^3–m^3; (3) last lower molar of left side. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 45, (1) figs. 4, 4a; (2) figs. 1–3; (3) fig. 5.

1027. **Phenacodus sulcatus** Cope. Type.

One left superior molar. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 599; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 179, pl. 45, figs. 7, 7a.

1129. **Plesiarctomys buccatus** Cope. Type.

Part of cranium including right maxillary bone containing three molars. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 171, pl. 44, fig. 8.

=Paramys buccatus.

1127. **Plesiarctomys delicatior** (Leidy). Plesiotype.
Portions of lower jaws, apparently of two individuals, associated with fragments of skeletal bones. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV., Pt. II, 1877, p. 172, pl. 44, figs. 10, 11.

=Paramys delicatior.

1099. **Plesiarctomys delicatissimus** (Leidy). Plesiotype.
Portion of left lower jaw containing two molars, m_1 and m_2, and incisor. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 172, pl. 44, figs. 9, 12.

=Paramys delicatissimus.

2630. **Pliauchenia humphresiana** Cope. Type.
Portion of left mandible with fragmentary teeth. Santa Fé (Miocene). Pojuaque, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 258; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 344, pl. 87, fig. 4.

2631. **Pliauchenia vulcanorum** Cope. Type.
Portion of left superior maxillary containing premolars p^3, p^4, and first molar, m^1. Middle Miocene. Pojuaque, New Mexico.

Cope, Proc. Acad, Nat. Sci. Phila., 1875, p. 259; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 345, pl. 77, fig. 5.

2632. **Pliauchenia vulcanorum** Cope? Paratype.
Portion of maxillary containing four teeth, dp^3–dp^4, m^1. Santa Fe marls, "Loup Fork" (Miocene). Pojuaque, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 77, fig. 6.

3649. **Procalemus major** (Leidy). Type.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, pp. viii, 53, pl. 18, fig. 1.

See Auchenia major.

3334. to 3340. 3559. 3650 to 3652. **Procamelus major** Leidy. Plesiotypes.
Teeth and various bones of skeletons. Pliocene. Levy County, Florida.

Leidy and Lucas, Trans. Wagner Free Inst. Sci., IV, 1896, p. 51, pl. 17, figs. 1–16; pl. 18, figs. 2–4.

Procamelus medius Leidy and Lucas. See Procamelus minor.

3435. **Procamelus minimus** (Leidy). Type.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, pp. viii, 53, pl. 18, fig. 7.

See Auchenia minimus.

3359. **Procamelus minimus** (Leidy). Plesiotypes.
3360. (1) Proximal extremity right metatarsal and metacarpal;
3366. (2) distal extremity left radius and ulna; (3) phalanges;
3367. (4) ungual phalanx. Pliocene. Levy County, Florida.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, Pt. 2, 1896, pl. 16, (1) figs. 1, 2; (2) fig. 3; (3) pl. 18, figs. 8, 9; (4) fig. 10.

3354. **Procamelus minor** (Leidy). Type.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 54, pl. 18, fig. 5 (as P. medius in error).

See Auchenia minor.

3351. **Procamelus minor** (Leidy). Plesiotypes.
3368. (1) Distal end left radius and ulna; (2) proximal phalanx;
3935. (3) upper molar, m^2. Pliocene. Florida.

Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, p. 54, (1) pl. 15, fig. 10; (2) pl. 18, fig. 6; (3) pl. 17, fig. 18 (as P. medius in error).

154. **Procamelus? niobrarensis** (Leidy). Cotypes.
155. Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 317.

=Camelops kansanus.
See Megalomeryx niobrarensis.

797. **Procamelus occidentalis** Leidy. Type.
Portion of right lower jaw containing complete molar-premolar series. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 23; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 151, pl. 15, figs. 5, 6.

795. **Procamelus occidentalis** Leidy. Paratypes.
798. (1) Anterior portion of lower jaw containing both canines and three incisors; (2) portion of palate containing fragmentary cheek teeth of both sides. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 23; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 151, (1) pl. 9, fig. 5; (2) pl. 15, fig. 7.

2128. **Procamelus occidentalis** Leidy. Plesiotypes.
2633. (1) Skull with part of skeleton including humerus, radio-ulna, and part of fore foot; (2) fragmentary lower teeth. Santa Fé Marls, "Loup Fork" (Miocene). Pojuaque, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 329, (1) pl. 53, fig. 2; pl. 76; pl. 77, figs. 1, 2; pl. 78, figs. 1–9; pl. 79; (2) pl. 77, fig. 3.

151. **Procamelus occidentalis** Leidy. See Homocamelus caninus.

796. **Procamelus robustus** Leidy. Type.
Portion of right lower jaw containing three premolars, p_1, p_2, p_4, and two molars, m_2, m_3. Loup Fork (Upper Miocene). Fort Niobrara, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 89; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 148, 381, pl. 15, figs. 1, 2

800. **Procamelus robustus** Leidy. Paratype.
Upper molar, m^2. Loup Fork (Upper Miocene). Fort Niobrara, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 89; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 148, 381, pl. 15, fig. 3.

569. **Protohippus mirabilis** (Leidy). See Merychippus mirabilis. (Also catalogue numbers 571, 572, 580–582.)

619. **Protohippus perditus** (Leidy). Type.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 275, pl. 17, fig. 5.

See Equus (Protohippus) perditus.

620. **Protohippus perditus** Leidy? Plesiotypes.
629. (1) Three lower molars of right side, m_1–m_3; (2) portion of right lower jaw containing three teeth, p_4, m_2, m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 315, pl. 19, (1) fig. 5; (2) figs. 13, 14.

621. **Protohippus placidus** Leidy. Cotypes.
623. Upper premolar, p^2, associated with six other upper molar
625. teeth and three upper cheek teeth, p^2 right, p^2 and dp^2
2365. left. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 277, pl. 18, figs, 39–48.

593. [? **Protohippus** sp. undet.]
Portion of left lower jaw containing four teeth, p_2–m_1. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 320, pl. 19, fig. 12 (unnamed).

[Identified by J. W. Gidley.]

570. [? **Protohippus** sp. undet.]
Series of lower teeth of right side, p_2–m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pl. 19, figs. 11, 28 (unnamed).

[Identified by J. W. Gidley.]

627. [? **Protohippus** sp. undet.]
Left lower premolar, p_4, in fragment of jaw. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 315, pl. 19, fig. 24 (unnamed).

[Probably a Protohippus. J. W. Gidley.]

626. [? **Protohippus** sp. undet.]
Fragment of right lower jaw containing two molars, m_2, m_3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 315, pl. 19, fig. 18 (unnamed).

[Probably a Protohippus. J. W. Gidley.]

116. [? **Protohippus** sp. undet.]
Portion of right lower jaw with symphysis, containing dp_2 and dp_4, p_3–m_2. Loup Fork (Miocene). Niobrara River, Nebraska.

Leidy, Journ. Acad. Nat. Sci. Phila., (2), VII, 1869, p. 316, pl. 19, figs. 16, 17 (unnamed).

[Identified by J. W. Gidley].

5416. **Protohippus** sp. undet.
Right upper molar. Middle Miocene. Pojuaque, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 323, pl. 75, figs. 7, 7a.

1111. **Prototomus hians** (Cope). Type.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 290.

=Sinopa hians.
See Stypolophus hians.

1021. **Prototomus multicuspis** Cope. Type.
Portion of right maxillary containing three molars (m^1–m^3) and premolar (p^4). Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 10.

=Sinopa multicuspis.
See Stypolophus multicuspis.

1018. **Prototomus multicuspis** Cope. Paratypes.
1020. (1) Portion of lower jaw containing three molars, m_1–m_3; (2) left lower jaw containing five teeth. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 10.

=Sinopa multicuspis.
See Stypolophus multicuspis.

1025. **Prototomus secundarius** Cope. Type.
Incomplete ramus supporting four teeth. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 9.

=Sinopa secundarius.
See Stypolophus secundarius.

1023. **Prototomus strenuus** Cope. Type.
Portions of both jaws containing nearly complete dentition. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 10.

=Sinopa strenuus.
See Stypolophus strenuus.

1022. **Prototomus viverrinus** Cope. Type.
Portions of skeleton including nearly complete cranium, vertebræ, parts of humerus, femur, and tibia. Wasatch (Eocene). New Mexico.

Cope, App. FF_3, Ann. Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 13.

=Sinopa viverrinus,
See Stypolophus viverrinus.

124. **Pseudælurus intrepidus** Leidy. Type.
Complete left lower jaw containing all the teeth except one incisor. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 22; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 52, 367, pl. 1, fig. 8.

1038. **Putorius nambianus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 305, pl. 69, fig. 3.

See Martes nambianus and Mustela nambianus.

775. **Rhinoceros crassus** Leidy. Type.
Fragment of upper jaw containing last molar, m^3. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 28; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, pp. 228, 390, pl. 23, fig. 8.

= Aphelops crassus.

774. **Rhinoceros crassus** Leidy. Paratypes.
805. (1) Lateral upper incisor; (2) fragment of lower jaw con-
5392. taining first temporary molar, dp_2; (3) right upper temporary molar, dp^2. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., 1858, p. 28; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 228, pl. 23, (1) figs. 6, 7; (2) fig. 9; (3) figs. 4, 5.

=Aphelops crassus.

3280. **Rhinoceros longipes** Leidy. Cotypes.
3376. Lower canine and left metacarpals II and IV. Pliocene. Williston, Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1890, p. 183.

=Aphelops longipes.
See Aphelops malacorhinus.

3177. **Rhinoceros meridianus** Leidy. Type.
Second right upper true molar. "Loup Fork" (Miocene). Washington County, Texas.

Leidy, Proc. Acad. Nat. Sci. Phila., 1865, p. 176; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 229, pl. 23, fig. 10.—Leidy and Lucas, Trans. Wagner Free Inst. Sci. Phila., IV, 1896, pl. 8, fig. 14.

=Aphelops meridianus.

138. **Rhinoceros nebrascensis** Leidy. Type and paratype.
139. Anterior portion of skull containing complete molar-premolar dentition, associated with portion of left lower jaw containing five teeth, p_3–m_3. White River (Oligocene). White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1850, p. 121; Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 556, pl. 12a, fig. 6.

=Hyracodon nebrascensis.
See Aceratherium nebrascensis.

114. **Rhinoceros occidentalis** Leidy. Type.
Cranium. White River (Oligocene). Bad Lands, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1850, p. 119; 1851, p. 276; Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 552, pl. 9, figs. 1, 2; Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, pp. 81, 114, pls. 12, 13; Journ. Acad. Nat. Sci. Phila. (2), VII, 1869, p. 220, pl. 22.

=Cænopus occidentalis.
See Aceratherium occidentale.

3190. **Rhinoceros proterus** Leidy. Type.
Last left upper molar, m^3. Pliocene. Williston, Levy County, Florida.

Leidy, Proc. Acad. Nat. Sci. Phila., 1885, p. 33.

=Aphelops proterus.
See Aphelops fossiger.

1111. **Sinopa hians** (Cope). See Prototomus hians and Stypolophus hians.

1018. **Sinopa multicuspis** (Cope). See Prototomus multicuspis and
1020. Stypolophus multicuspis.
1021.

1025. **Sinopa secundarius** (Cope). See Prototomus secundarius and Stypolophus secundarius.

1023. **Sinopa strenuus** (Cope). See Prototomus strenuus and Stypolophus strenuus.

1022. **Sinopa viverrinus** (Cope). See Prototomus viverrinus and Stypolophus viverrinus.

2136. **Stagodon validus** Marsh. Type.
Anterior portion of right lower jaw containing broken canine and two premolars (p_1, p_2). Ceratops beds (Cretaceous). Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 256, pl. 8. fig. 7.

1097. **Steneofiber pansus** Cope. Type in part.
Fragments of incisor and limb bones. "Loup Fork" (Miocene). New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1872, p. 222; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 297, pl. 69, figs. 7–12.

2041. **Steneofiber pansus** Cope. Plesiotype.
Portion of incisor and lower molar. "Loup Fork" (Miocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 297, pl. 69, figs. 13, 14.

2693. **Stylacodon gracilis** Marsh. Type.
Left ramus containing nearly all the teeth. Morrison (Jurassic). Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XVIII, 1879, p. 60; XXXIII, 1887, p. 335, pl. 9, fig. 1; Mon. XXVII, U. S. Geol. Surv., 1897, p. 508, text fig. 68.

1111. **Stypolophus hians** Cope. Type.
Many portions of skeleton including parts of skull. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 72, pl. 38, figs. 12–30.

=Sinopa hians.
See Prototomus hians.

1021. **Stypolophus multicuspis** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pp. 112, 116, pl. 39, fig. 14.

=Sinopa multicuspis.
See Prototomus multicuspis.

1018. **Stypolophus multicuspis** (Cope). Paratypes.
1020.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pp. 112, 116, pl. 39; (1) fig. 13; (2) fig. 12.

=Sinopa multicuspis.
See Prototomus multicuspis.

1025. **Stypolophus secundarius** Cope. Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 115.

=Sinopa secundarius.

1023. **Stypolophus strenuus** Cope. Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 117, pl. 39, fig. 11.

=Sinopa strenuus.
See Prototomus strenuus.

1022. **Stypolophus viverrinus** (Cope). Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 112, pl. 38, figs. 1–11.

=Sinopa viverrinus.
See Prototomus viverrinus.

4711. **Symborodon? montanus** (Marsh). Plesiotype.
Skull. White River (Oligocene). Washington County, South Dakota.

Osborn, Bull. Amer. Mus. Nat. Hist., XVI, 1902, p. 104, text fig. 8.

2875. **Telacodon lævis** Marsh. Paratype.
Upper molar of right side. Ceratops beds (Cretaceous.) Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 258, pl. 11, fig. 1.

2133. **Telacodon præstans** Marsh. Type.
Portion of right lower jaw containing two molars. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 258, pl. 9, fig. 4.

2886. **Telacodon præstans** Marsh. Paratype.
Lower molar. Ceratops beds (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 258, pl. 11, fig. 8.

2145. **Teleoceras fossiger** (Cope). See Aceratherium acutum and
3288. Eusydon maximus.

1211. **Titanops curtus** Marsh. Type.
Complete cranium. White River (Oligocene). Colorado.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 330, text fig. 11.

4256. **Titanops medius** Marsh. Type.
Portion of skull including horn cores and dentition complete. White River (Oligocene). Washington County, South Dakota.

Marsh, Amer. Journ. Sci. (3), XLII, 1891, p. 269.

=Brontotherium medium.

4289. **Titanotherium crassicornis** (Marsh). See Allops crassicornis.

4251. **Titanotherium serotinum** (Marsh). See Allops serotinus.

3924. **Trigonias osborni** Lucas. Type.
Anterior part of cranium, with incisors and canines. White River (Oligocene). Bad Lands, South Dakota.

Lucas, Proc. U. S. Nat. Mus., XXIII, 1900, p. 221, text figs. 1, 2.

2885. **Tripriodon cœlatus** Marsh. Plesiotype.
Right upper molar. Ceratops beds (Cretaceous). Lance Creek, Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, pl. 5, fig. 3.

=Meniscoëssus cœlatus.

4214. **Ursus procerus** Miller. Type.
Skull. Pleistocene. Middletown, Ohio.

Miller, Proc. Biol. Soc. Wash., XIII, 1899, p. 55.

1092. **Viverravus protenus** (Cope). See Limnocyon protenus and Didymictis protenus.

1088 to 1091. **Viverravus protenus** (Cope). See Didymictis protenus.

REPTILES.

4213. **Acherontemys heckmani** Hay. Type.
Carapace. Roslyn (Miocene). Roslyn, Kittitas County, Washington.
Hay, Proc. U. S. Nat. Mus., XXII, 1899, p. 23, pl. 6.

2344. **Alligator chamensis** Cope. Type.
Premaxillary. Wasatch (Eocene). New Mexico.
Cope, App. FF_3, Rept. Chief Engineers, in Rept. Sect'y War, II, Pt. II, 1874, p. 603.
=Crocodylus chamensis.

4115. **Alligator heterodon** Cope. Type.
Fragments of cranium. Wasatch (Eocene). Near Black Buttes, Wyoming.
Cope, Proc. Amer. Phil. Soc., XII, 1872, p. 544.
=Crocodylus heterodon.

4972. **Allosaurus medius** Marsh. Cotypes.
5452. Tooth, astragulus, and fragmentary phalanx of hind foot.
5453. Potomac (Jurassic). Prince George County, Maryland.
Marsh, Amer. Journ. Sci. (3), XXXV, 1888, p. 93.

4096. **Anosteira radulina** Cope. Type.
Anterior and posterior marginal bones. Bridger (Eocene). Bad Lands, Hams Fork, Wyoming.
Cope, Pal. Bull. No. 9, 1872, p. 1; Proc. Amer. Phil. Soc. XII, 1872, p. 555; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 128, pl. 18, figs. 18, 19.

4094. **Anosteira trionychoides** Cope. Type.
Costal bone. Bridger (Eocene). Bad Lands, Cottonwood Creek, near Fort Bridger, Wyoming.
Cope, Pal. Bull. No. 1, 1872, p. 2; Proc. Amer. Phil. Soc., XII, 1872, p. 461.
=Plastomenus trionychoides.

218. **Antrodemus valens** (Leidy). See Poicilopleuron valens.

2315. **Antrodemus valens** (Leidy). See Labrosaurus ferox.

4971. **Astrodon altus** (Marsh). See Pleurocœlus altus.

2267. **Astrodon nanus** (Marsh). See Pleurocœlus nanus. (Also catalogue numbers 4968, 4969, 4970, 5372.)

4089. **Axestemys byssinus** (Cope). See Axestus byssinus.

4089. **Axestus byssinus** Cope. Type.
Vertebræ, ilium, humerus, and various fragments of skeleton. Bridger (Eocene). Blacks Fork, Green River, Wyoming.
Cope, Pal. Bull. No. 1, 1872, p. 3; Proc. Amer. Philos. Soc., XII, 1872, p. 462; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 116, pl. 15, figs. 1–12.
=Axestemys byssinus.

103. **Baëna arenosa** Leidy. Type.
Carapace and plastron. Bridger (Eocene). Junction of Big Sandy and Green rivers, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 123; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 161, 341, pl. 13, figs. 1, 2.

974. **Baëna arenosa** Leidy. Plesiotype.
Anterior part of plastron. Bridger (Eocene). Junction of Big Sandy and Green rivers, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 161, pl. 15, figs. 4, 5.

107. **Baëna arenosa** Leidy. Plesiotype.
Part of carapace and plastron. Eocene. New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 52, pl. 24, fig. 32.

2275. **Baëna hebraica** Cope. Type.
Posterior part of carapace and plastron. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Pal. Bull. No. 1, 1872, p. 4; Proc. Amer. Phil. Soc., XII, 1872, p. 463; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 146, pl. 19, figs. 1, 2.

4056. **Baëna ponderosa** Cope. Type.
Numerous parts of carapace. Bridger (Eocene). Bad Lands, Hams Fork, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 624; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 150, pl. 17, figs. 3–8.

1152. **Baptemys costilatus** (Cope). See Dermatemys costilatus.

4739. **Bison alticornis** Marsh. Type.
Horn cores and connecting portion of skull. Laramie (Cretaceous). Green Mountain Creek, near Denver, Colorado.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 323, text figs. 1, 2.

=Ceratops alticornis.

4989. **Brachauchenius lucasi** Williston. Type.
Palatal surface of skull, mandibles, thirty-four vertebræ in sequence with the atlas, and numerous ribs of both sides. Fort Benton (Cretaceous). Near Ada, Ottawa County, Kansas.

Williston, Field Columbian Mus. Pub., No. 73, Geol. Ser. II, No. 1, 1903, p. 57, pls. 24, 25.—Lucas, Smithsonian Misc. Coll. (Quart. Issue), XLV, 1903, p. 96.

5383. **Brontosaurus excelsus** Marsh. Plesiotype.
Terminal phalanx. Morrison (Jurassic). Como, Wyoming.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 174, text figs. 21–23.

4712. **Brontosaurus** sp. Plesiotype.
Cervical vertebræ. Morrison (Jurassic). Canyon City, Colorado.

Hatcher, Mem. Carnegie Mus., II, 1903, p. 75.

See Diplodocus longus.

4287. **Brontosaurus** sp. See Diplodocus longus.

2210. **Camptosaurus nanus** Marsh. Type.
Left fore leg, associated with vertebræ, pelvis, limb bones, and a portion of the feet. Morrison (Jurassic). Eight miles east of Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLVIII, 1894, p. 85, pl. 5, fig. 3; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 196, pl. 55, fig. 2.

2592. "**Carnivorous dinosaurian**" Cope.
Tooth. Triassic. Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geol. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 22, fig. 15.

4739. **Ceratops alticornis** (Marsh). Type.

Marsh, Amer. Journ. Sci. (3), XXXVIII, 1889, p. 174.—Barbour, Amer. Nat., XXIII, 1890, p. 392, figs. 5, 6.—Marsh, Mon. XXVII, U. S. Geol. Surv., 1897, p. 512, figs. 79, 80.

See Bison alticornis.

2411. **Ceratops montanus** Marsh. Type.
Horn cores and basioccipital. Judith River (Cretaceous). Twelve miles above mouth of Cow Creek, Missouri River, Montana.

Marsh, Amer. Journ. Sci. (3), XXXVI, 1888, p. 477, pl. 11, figs. 1, 2; Sixteenth Ann. Rept. U. S. Geol. Surv., 1894–5, Pt. 1, 1896, p. 216, pl. 63, figs. 1–3.

4802. **Ceratops montanus** Marsh. Plesiotype.
Squamosal. Judith River (Cretaceous). Cow Island, Montana.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, pl. 63, fig. 6.

5457. **Ceratops paucidens** (Marsh). Type.

Marsh, Amer. Journ. Sci. (3), XXXIX, 1890, p. 83.

See Hadrosaurus paucidens.

4735. **Ceratosaurus nasicornis** Marsh. Type.
Skull and large portion of the skeleton. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Amer. Jour. Sci. (3), XXVII, 1884, p. 330, pl. 8, figs. 9, 10, pl. 10, fig. 5; XXVIII, 1884, p. 161, fig. 1; XLIV, 1892, p. 347, pl. 7; Geol. Mag., London, Dec. 3, X, 1893, p. 153, pl. 6; Amer. Journ. Sci. (3), L, 1895, p. 494; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, pp. 156, 162, figs, 4, 5, p. 236, figs. 64, 65, pls. 8, 9, 10, fig. 1, pl. 14; Compte rendu des seances du troisieme Congres International de Zoologie, Leyden, 1895, p. 202, text figs. 9, 10, pl. 1, fig. 5; Mon. U. S. Geol. Surv., XXVII, 1897, p. 503, text. fig. 60, pl. 25, fig. 60.

2414. **Claosaurus annectens** Marsh. Type.
Very complete skeleton. Laramie (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 453, fig. 4; XLIV, 1892, pp. 171, 344, pl. 2, pl. 3, fig. 1, pl. 6; XLV, 1893, p. 83; Geol. Mag., London, Dec. 3, X, 1893, p. 155, pl. 7; Amer. Journ. Sci. (3), XLVIII, 1894, pl. 7, fig. 5.

= Thespesius occidentalis.

See Trachodon annectens.

3814. **Claosaurus annectens** Marsh. Plesiotype.
Skull, part of the fore limbs, and impression of skin. Laramie (Cretaceous). Castle Butte, seven miles northwest of Forsyth, Montana.

Hatcher, Annals Carnegie Mus., I, 1901, p. 130, fig. 1.

=Thespesius occidentalis.

5370. **Claosaurus annectens** Marsh. Plesiotype.
Teeth. Cretaceous. Wyoming.

Marsh, Amer. Journ. Sci. (3), XLV, 1893, pl. 5, figs. 1–3; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 221, pl. 78, figs. 2a–2c; Mon. XXVII, U. S. Geol. Surv., 1897, p. 517, fig. 82.

=Thespesius occidentalis.
See Trachodon annectens.

49. **Clidastes affinis** Leidy. Cotypes.
57. Fragments of cranium, basisphenoid, humerus, and portions
63. of the lower jaws. Niobrara (Cretaceous). Smoky
69. Hill River, Kansas.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 283, 344, pl. 34, figs. 6–9, 11.

=Clidastes velox.

49. **Clidastes velox** (Marsh). See Clidastes affinis. (Also catalogue numbers 57, 63, 69.)

4973. **Cœlurus gracilis** Marsh. Type.
Ungual phalanx. Potomac (Jurassic). Muirkirk, Prince George County, Maryland.

Marsh, Amer. Journ. Sci. (3), XXXV, 1888, p. 94.

5458. **Compsemys plicatulus** Cope. See Glyptops ornatus.

960. **Compsemys victus** Leidy. Type.
Vertebral plate, portion of the fifth costal, and a fragment of the last costal plate. Great Lignite (Cretaceous). Near Long Lake, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 312; Trans. Amer. Phil. Soc., XI, 1860, p. 152, pl. 11, figs. 5, 6, 7.

2134. **Coniophis precedens** Marsh. Type.
Vertebra. Laramie (Cretaceous). Peterson's Quarry, Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3) XLIII, 1892, p. 450 figs. 1 a–e.

Crocodilus. See Crocodylus (Hay, Bull. No. 179, U. S. Geol. Surv., 1902, p. 512).

932. **Crocodylus aptus** Leidy. Type.
Cervical vertebra. Wasatch (Eocene). South Bitter Creek, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1869, p. 67; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 126, pl. 8, fig. 2.

2344. **Crocodylus chamensis** Cope. Type.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 67, pl. 32, figs. 11, 12.

See Alligator chamensis.

1108. **Crocodylus chamensis** Cope. Plesiotypes.
1109. (1) Frontal, parts of quadrate, lower jaws, muzzle, and dermal scuta; (2) part of frontal, vertebral column with numerous omissions, and proximal portion of femur. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 67, pl. 32, (1) figs. 1–10; (2) figs. 13–21.

4048. **Crocodylus clavis** Cope. Type.
Parts of right maxillary and premaxillary bones, part of the mandibular ramus with teeth, cervical and dorsal vertebræ. Bridger (Eocene). Mammoth Buttes, South Bitter Creek, Wyoming.

Cope, Pal. Bull. No. 6, 1872, p. 3; Proc. Amer. Philos. Soc., XII, 1872, p. 485; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 157, pl. 21, figs. 4–8.

919. **Crocodylus elliotti** Leidy. Type.
Anterior part of left maxillary. Bridger (Eocene). Junction of Big Sandy and Green rivers, Sweetwater County, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 100; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 126, pl. 8, fig. 4.

92. **Crocodylus elliotti** Leidy. Plesiotypes.
141. (1) Proximal end of right femur; (2) large portion of upper
142. part of skull; (3) fragment of skull; (4) first lumbar
925. vertebra. Bridger (Eocene). Little Sandy River, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 127, pl. 8, (1) fig. 5; (2) fig. 6; (3) fig. 7; (4) fig. 1.

2594. **Crocodylus (?) elliotti** Leidy. Plesiotypes.
2595. (1) Frontal and part of mandible with teeth; (2) fragments of jaw with teeth and various pieces of the skeleton. Bridger (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 65, pl. 31, (1) figs. 6, 7; (2) figs. 8–17.

2605. **Crocodylus grypus** Cope. Cotypes.
2606. Fragments of skulls, jaws, vertebræ, and fragments of limb bones. Bridger? (Eocene). Gallinas Creek, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 32; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 63, pl. 30, figs. 1–26.

4115. **Crocodylus heterodon** (Cope). Type.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 34; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 164, pl. 23a, figs. 10–12.

See Alligator heterodon.

4117. **Crocodylus heterodon** (Cope). Plesiotype.
Dermal scuta. Bridger (Eocene). Upper Green River, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 164, pl. 23a, figs. 19–22.

4116. **Crocodylus heterodon** (Cope). Plesiotype.
Part of right maxillary, lumbar vertebra, caudal vertebra, shaft of femur, and dermal scute. Bridger (Eocene). Near Laclede, Wyoming.

Cope, Rept. U. S. Geol. Surv. Terr., III, 1884, p. 164, pl. 23a, figs. 14–18.

2624. **Crocodylus ? liodon** Marsh. Plesiotype.
Axis, vertebræ, parts of the quadrate and parietal of two individuals. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1807, p. 67, pl. 31, figs. 18–23.

4112. **Crocodylus polyodon** (Cope). Type.

Cope, Amer. Nat., XVI, 1882, p. 981; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 154, pl. 23a, figs. 2, 3.

See Diplocynodus polyodon.

4113. **Crocodylus subulatus** Cope. Type.
Dentary, articular region of the right ramus, fragment of premaxillary, cervical, and dorsal vertebræ. Bridger (Eocene). Upper Green River, Wyoming.

Cope, Pal. Bull. No. 9, 1872, p. 1; Proc. Amer. Phil. Soc. XII, 1872, p. 544 (as Crocodilus (Ichthyosuchus) subulatus); Rept. U. S. Geol. Surv. Terr., III, 1884, p. 152, pl. 23a, figs. 4–9.

See Diplocynodus subulatus.

4118. **Crocodylus sulciferus** Cope. Type.
Tooth. Bridger (Eocene). Bluffs of Upper Green River, Wyoming.

Cope, Pal. Bull. No. 9, 1872, p. 1; Proc. Amer. Phil. Soc., XII, 1872, p. 555; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 152, pl. 23a, fig. 23.

2593. **Crocodylus wheelerii** Cope. Type.
Portions of parietal, frontal, nasal, premaxillary, quadrate, angular, surangular, and fragment of mandible. Eocene. Gallinas Creek, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 33; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 64, pl. 31, figs. 1–5.

931. **Crocodylus** sp. undet. ?
First caudal vertebra. Eocene. Little Sandy River, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 133, pl. 8, fig. 3.

3903. **Cynocercus incisus** Cope? Plesiotype.
Proximal end of humerus, femur, portion of scapula, coracoid, and limb bone. Niobrara (Cretaceous). Smoky Hill River, Kansas.

Leidy, Rept. U. S. Geol. Surv. Terr. I, 1873, p. 269, pl. 36, figs. 17–21.

=Toxochelys latiremis.

1152. **Dermatemys costilatus** Cope. Type.
Parts of carapace. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 36; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 52, pl. 24, figs. 17–31.

=Baptemys costilatus.

1107. **Diplocynodon sphenops** (Cope). See Diplocynodus sphenops.
5364.

4112. **Diplocynodus polyodon** Cope. Type.
Dentary and posterior portion of left ramus. Bridger (Eocene). Bluffs of Upper Green River, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 614.

=Crocodylus polyodon.

1107. **Diplocynodus sphenops** Cope. Type.
Parts of frontal, parietal, articular, angular and surangular, cervical, lumbar, sacral and caudal centra. Eocene. New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 31; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 60, pl. 29, figs. 1–7.

=Diplocynodon sphenops.

5364. **Diplocynodus sphenops** Cope. Paratype.
Fragments of skull and mandibles, cervical, dorsal, and lumbar vertebræ, proximal extremity of humerus, and dorsal dermal bones. Eocene. New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 31; Rept. U. S. Geol. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 60, pl. 29, figs. 9–22.

=Diplocynodon sphenops.

4113. **Diplocynodus subulatus** (Cope). Type.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 613.

=Crocodylus subulatus.

4713. **Diplodocus longus** Marsh. Plesiotype.
Dorsal vertebræ. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. I, 1896, pl. 27, fig. 4.

4287. **Diplodocus longus** Marsh. Plesiotype.
Right hind foot associated with femur, tibia, and fibula. Morrison (Jurassic). Near Canyon City, Colorado.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 180, pl. 28, fig. 2. Hatcher, Memoirs of Carnegie Museum Vol. 1. No. 1, 1901 p. 56
=Brontosaurus sp.

4712. **Diplodocus longus** Marsh. Plesiotype.
Cervical vertebræ. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, pl. 27, fig. 3.

=Brontosaurus sp.

2672. **Diplodocus longus** Marsh. Plesiotype.
Skull and jaws. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Amer. Journ. Sci. (3), XXVII, 1884, pl. 3, figs. 1–3, pl. 4, fig. 1; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. I, 1896, p. 177, text fig. 27, pl. 25, pl. 76, fig. 4; Mon. U. S. Geol. Surv., XXVII, 1897, p. 495, text fig. 44.—Hatcher, Mem. Carnegie Mus., I, 1901, pl. 2, figs. 1–3.

5368. = 2672 **Diplodocus longus** Marsh. Plesiotype.
Atlas. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, pl. 27, figs. 1, 2.—Hatcher, Mem. Carnegie Mus., I, 1901, p. 19, figs. 4, 5.

4288. **Diracodon laticeps** Marsh. Type.
Caudal vertebræ, spines, and plate. Morrison (Jurassic). Wyoming.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 416, pl. 9; Geol. Mag., London, Dec. 3, V, 1888, pl. 3; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 193, pl. 51.

2364. **Dystrophæus viæmalæ** Cope. Type.
Ulna, radius, metacarpals, and part of pubis. Jurassic. Painted Canyon, southeastern Utah.

Cope, Proc. Amer. Phila. Soc., XVI, 1877, p. 581; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 34, pl. 83, figs. 1–6.—Huene, Neues Jahrb., Beilage-Band XIX, 1904, p. 319, text figs. 4, 5, pls. 14–16.

2578. **Emys cibollensis** Cope. Type.
Portions of carapace and plastron. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 57, pl. 27, fig. 4, pl. 28, figs. 3–6.

4125. **Emys euthneta** Cope. Cotypes.
Vertebral and marginal bones. Wasatch (Eocene). Black Buttes, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 628; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 133, pl. 18, figs. 34–42.

109. **Emys haydeni** Leidy. Type.
Carapace. Bridger (Eocene). Church Buttes, Uinta County, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 123; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 145, 340, pl. 9, fig. 6.

98. **Emys hemispherica** Leidy. Type.
Carapace and plastron. White River (Oligocene). Bad Lands, White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1851, p. 173.

=Stylemys nebrascensis.
See Testudo hemispherica.

4129. **Emys gravis** (Cope). Type.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr., for 1872, 1873, p. 626.

=Notomorpha gravis.

5375. **Emys jeanesi** Leidy. Type.
Carapace and plastron. Bridger (Eocene). Near Fort Bridger, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 123.

=Emys wyomingensis.

2576. **Emys latilabiatus** Cope. Cotypes.
2578. Portions of carapace and plastron; anterior portion of plastron. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 36.

=Emys lativertibralis.

2576. **Emys lativertibralis** Cope. Cotypes.
2578.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. 2, 1877, p. 53, pl. 27, figs. 1–3; pl. 28, figs. 1, 2.

See Emys latilabiatus.

4061. **Emys megaulax** Cope. Cotypes.
4121. (1) Vertebræ and marginal bones; (2) vertebræ and costal bones. Wasatch (Eocene). Black Buttes, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 628; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 132, pl. 18, (1) figs. 26–31; (2) figs. 32, 33.

4097. **Emys polycypha** (Cope). Cotypes.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, pp. 625, 630; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 131, pl. 18, figs. 20–22.

See Palæotheca polycypha.

4088. **Emys septaria** Cope. Type.
Portions of carapace and plastron. Bridger (Eocene). Bad Lands, South Bitter Creek, Wyoming.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 625; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 139, pl. 17, figs. 9–13.

963. **Emys stevensonianus** Leidy. Cotypes.
965. Part of carapace and portions of plastrons. Bridger
976. (Eocene). Grizzly Buttes, near Fort Bridger, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 5.

=Emys wyomingensis.

2107. **Emys terrestris** (Cope). Type.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 629; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 131, pl. 18, figs. 23–25.

See Palæotheca terrestris.

4103. **Emys testudineus** (Cope). Cotypes.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 627; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 134, pl. 23, figs. 12, 13.

See Notomorpha testudinea.

963. **Emys wyomingensis** Leidy. Plesiotypes.
965. Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 141, pl. 9, figs. 2–4.
976.

See Emys stevensonianus.

5375. **Emys wyomingensis** Leidy. Plesiotype.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 140, 142, 340, pl. 10, figs. 1, 2.

See Emys jeanesi.

5458. **Glyptops ornatus** Marsh. Type.
Part of carapace and plastron. Morrison (Jurassic). Como, Wyoming.

Marsh, Amer. Journ. Sci. (3), XL, 1890, p. 176, pl. 7; Mon. U. S. Geol. Surv., XXVII, 1897, p. 507, text figs. 63, 64.

=Compsemys plicatulus (fide O. P. Hay).

4054. **Hadrianus allabiatus** Cope. Type.
Portions of carapace and plastron. Bridger (Eocene). Bad Lands, Cottonwood Creek, Wyoming.

Cope, Pal. Bull. No. 3, 1872, p. 3; Proc. Amer. Phil. Soc., XII, 1873, p. 471; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 140, pl. 15, figs. 13, 14, 15.

2597. **Hadrianus corsoni** (Leidy). Plesiotype.
Fragment of right post-abdominal bone. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 58, pl. 24, fig. 36.

2186. **Hadrianus octonarius** Cope. Type.
Carapace, plastron, and limb bones. Bridger (Eocene). Blacks Fork of Green River, Wyoming.

Cope, Pal. Bull. No. 2, 1872, p. 3; Proc. Amer. Phil. Soc., XII, 1873, p. 468; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 140, pl. 20.

4046. **Hadrianus schucherti** Hay. Type.
Carapace and imperfect plastron. Jacksonian (Eocene). Cocoa, Alabama.

Hay, Proc. U. S. Nat. Mus., XXII, 1899, p. 22, pls. 4, 5.

2599. **Hadrianus** sp. undet.
Fragment of left post-abdominal bone. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 24, fig. 38.

2598. **Hadrianus** sp. undet.
Fragments of post-abdominal bones. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 24, fig. 37.

2600. **Hadrianus** sp. undet.
Right episternal and other fragments. Wasatch (Eocene). Gallinas Creek, New Mexico.

Cope, Rept. U. G. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 24, fig. 39.

5457. **Hadrosaurus paucidens** Marsh. Type.
? Left maxillary associated with left squamosal. Laramie (Cretaceous). Cow Island, Montana.

Marsh, Amer. Journ. Sci. (3), XXXIX, 1889, p. 336.

=Ceratops paucidens.

4136. **Heterodontosuchus ganei** Lucas. Type.
Anterior part of jaw. Triassic. Clay Hill, Henry Mountain quadrangle, southern Utah.

Lucas, Amer. Journ. Sci. (4), VI, 1898, p. 399.

4457. **Isodectes punctulatus** (Cope). Plesiotype.
Partial skeleton lacking head and anterior portions. Coal Measures. Linton, Jefferson County, Ohio.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 88, pl. 3, fig. 3.

2315. **Labrosaurus ferox** Marsh. Type.
Left dentary. Morrison (Jurassic). Colorado.

Marsh, Amer. Journ. Sci. (3), XXVII, 1884, p. 333, pl. 9, figs. 4–6.

=Antrodemus valens.

39. **Lestosaurus coryphæus** (Cope). Plesiotypes.
50. (1) Caudals; (2) ulna?; (3) vertebræ; (4) palate bone
62. with teeth; (5) paddle bone; (6) cervical vertebræ;
76. (7) second cervical. Niobrara (Cretaceous). Smoky
226. Hill River, Kansas.
3901.
5365. Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 276, (1) pl. 36, figs. 8–12; (2) fig. 13; (3) figs. 4, 5; (4) pl. 34, fig. 12; (5) pl. 36, fig. 14; (6) fig. 6; (7) fig. 7.

41. **Liodon dyspelor** Cope. Type.
Vertebræ and limb bones. Niobrara (Cretaceous). Fort McRae, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1870, p. 132; Rept. U. S. Geol. Surv. Terr., II, 1875, p. 167, pl. 31, fig. 5.

=Tylosaurus dyspelor.

2152. **Metoposaurus fraasi** Lucas. Type.
Episternum. Triassic. Five miles east of Tanners Crossing, Little Colorado River, Arizona.

Lucas, Proc. U. S. Nat. Mus., XXVII, 1904, p. 194, pl. 3.

5384. **Morosaurus agilis** Marsh. Type.
Posterior half of skull, atlas, axis, and third cervical vertebra. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Amer. Journ. Sci. (3), XXXVII, 1889, p. 334, text fig. 3; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, pl. 30, fig. 1.

5369. **Morosaurus agilis** Marsh. Plesiotypes.
5371. (1) Right hind foot; (2) right fore foot associated with radius and ulna. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 182, pl. 37, (1) fig. 2, (2) fig. 1.

873. **Mosasaurus** sp. undet.
Part of upper jaw. Cretaceous. Marion, Perry County, Alabama.

Leidy, Smithsonian Contrib. to Knowl., XIV, 1865, p. 72, pl. 19, fig. 7.

4129. **Notomorpha gravis** Cope. Type.
Marginal bones and part of plastron, associated with fragments of carapace. Green River (Eocene). Bear River, near Evanston, Wyoming.

Cope, Proc. Amer. Phil. Soc., XII, 1872, p. 476; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 143, pl. 23, figs. 14–16.

See Emys gravis.

4103. **Notomorpha testudinea** Cope. Cotypes.
Entosternal and left posterior lobe of plastron. Green River (Eocene). Bear River, near Evanston, Wyoming.

Cope, Proc. Amer. Phil. Soc., XII, 1872, p. 475.

=Emys testudineus.

988. **Oligosimus grandævus** Leidy. Type.
Vertebra. Cretaceous? Henrys Fork, Green River, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1872, p. 39; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 286, 345, pl. 16, figs. 18, 19.

4736. **Ornithomimus sedens** Marsh. Type.
Sacrum, pelvis, and twelve anterior caudals. Laramie (Cretaceous). Alkali Creek, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLIII, 1892, p. 451.

4097. **Palæotheca polycypha** Cope. Cotypes.
Vertebral and marginal bones. Bridger (Eocene). Wyoming.

Cope, Pal. Bull. No. 1, 1872, p. 4; Proc. Amer. Phil. Soc., XII, 1872, p. 463.

=Emys polycypha.

2107. **Palæotheca terrestris** Cope. Type.
Vertebral, episternal, and costal bones. Bridger (Eocene). Wyoming.

Cope, Pal. Bull. No. 1, 1872, p. 5; Proc. Amer. Phil. Soc., XII, 1872, p. 464.

=Emys terrestris.

5373. **Phytosaurus rostatus** (Marsh). See Rhytidodon rostratus.

1000. **Piratosaurus plicatus** Leidy. Type.
Tooth. Cretaceous. Red River Settlement, 50 miles south of Selkirk Settlement, Manitoba.

Leidy, Smithsonian Contrib. to Knowl., XIV, No. 6, 1865, pp. 29, 30, pl. 19, fig. 8.

2198. **Placerias hesternus** Lucas. Type.
Right humerus. Triassic. Three miles north of Tanners Crossing, Little Colorado River, Arizona.

Lucas, Proc. U. S. Nat. Mus., XXVII, 1904, p. 194, pl. 4.

5380. **Placosauridæ**, gen. and sp. undet.
Fragment of skeleton including dermal and cranial plates, distal end of femur and shaft of humerus. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 32, figs. 26–36.

1132. **Plastomenus communis** Cope. Type.
Series of costal bones. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 50, pl. 25, figs. 1–1b.

1140. **Plastomenus communis** Cope. Paratype.
Part of carapace. Wasatch (Eocene). New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 50, pl. 25, fig. 5.

1138. **Plastomenus multifoveatus** Cope. Plesiotype.
Costal bone. Wasatch (Eocene). New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 49, pl. 25, fig. 11.

=Plastomenus thomasii (fide O. P. Hay).

1138. **Plastomenus thomasii** (Cope). See Plastomenus multifoveatus.

4094. **Plastomenus trionychoides** (Cope). Type.

Cope, Sixth Ann. Rept. U. S. Geol. Surv. Terr. for 1872, 1873, p. 619; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 123, pl. 18, fig. 1.

See Anosteira trionychoides.

4971. **Pleurocœlus altus** Marsh. Type.

Tibia, proximal and distal ends of fibula. Potomac (Jurassic). Prince George County, Maryland.

Marsh, Amer. Journ. Sci. (3), XXXV, 1888, p. 92.

=Astrodon altus.

4968. **Pleurocœlus nanus** Marsh. Cotypes.
4969. Dorsal, sacral, and caudal vertebræ. Potomac (Jurassic).
4970. Prince George County, Maryland.

Marsh, Amer. Journ. Sci. (3), XXXV, 1888, p. 90, text figs. 1–6; Sixteenth Ann. Rept. U. S. Geol. Surv., 1896, pl. 40, figs. 4–9.

=Astrodon nanus.

2267. **Pleurocœlus nanus** Marsh. Plesiotypes.
5372. (1) Metacarpal, metatarsal, and ungual phalanx; (2) distal caudal vertebra. Potomac (Jurassic). Prince George County, Maryland.

Marsh, Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, 1896, (1) pl. 41, figs. 1–7; (2) pl. 40. figs. 10, 11.

=Astrodon nanus.

218. **Poicilopleuron valens** Leidy. Type.

Half of vertebral centrum. Cretaceous? Middle Park, Colorado.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 3 (as Poicilopleuron (Antrodemus) valens); Rept. U. S. Geol. Surv. Terr., I, 1873, p. 267, pl. 15, figs. 16–18 (on plate as Antrodemus).

=Antrodemus valens.

2135. **Priconodon crassus** Marsh. Type.

Tooth. Potomac (Jurassic). Muirkirk, Prince George County, Maryland.

Marsh, Amer. Journ. Sci. (3), XXXV, 1888, p. 93, text figs. 7–9; Sixteenth Ann. Rept. U. S. Geol. Surv. 1896, p. 187, pl. 44, figs. 2a–c.

4126. **Protagras lacustris** Cope. Type.

Vertebræ. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Pal. Bull. No. 3, 1872, p. 3; Proc. Amer. Phil. Soc., XII, 1872, p. 471; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 103, pl. 23, figs. 17, 18.

4047. **Pterosphenus schucherti** Lucas. Type.

Vertebræ. Jacksonian (Eocene). Cocoa, Alabama.

Lucas, Proc. U. S. Nat. Mus., XXI, 1898, p. 637, pls. 45, 46.

5373. **Rhytidodon rostratus** Marsh. Type.

Posterior portion of skull. Triassic. North Carolina.

Marsh, Amer. Journ. Sci. (4), II, 1896, p. 61, text fig. 2.

=Phytosaurus rostratus.

2185. **Saniwa ensidens** Leidy. Type.
Dorsal vertebræ and other portions of skeleton. Bridger (Eocene). Near Granger, Wyoming.

Leidy, Proc. Acad. Nat. Sci. Phila., 1870, p. 124; Rept. U. S. Geol. Surv. Terr., I, 1873, pp. 181, 344, pl. 15, fig. 15.

4471. **Sauropleura latithorax** Cope. Type.
Cranium and anterior part of body on slab. Coal Measures. Linton, Jefferson County, Ohio.

Cope, Proc. Amer. Philos. Soc., XXXVI, 1897, p. 86, pl. 3, fig. 4.

4752. **Stegosaurus marshi** Lucas. Type.
Vertebræ, leg bones, sacrum, spines, and plates. Lower Cretaceous? South Dakota.

Lucas, Proc. U. S. Nat. Mus., XXIII, 1901, p. 591, pls. 23, 24.

4934. **Stegosaurus stenops** Marsh. Type.
Skull and partial skeleton, including vertebral column and dermal plates. Morrison (Jurassic). Canyon City, Colorado.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 415, pl. 6; Geol. Mag., London, Dec. 3, V, 1888, pl. 1; Sixteenth Ann. Rept. U. S. Geol. Surv. for 1894–5, Pt. 1, 1896, p. 186, pl. 43, figs. 1–3; Mon. U. S. Geol. Surv., XXVII, 1897, p. 499, text fig. 52.

4937. **Stegosaurus sulcatus** Marsh. Type.
Caudal spine. Morrison (Jurassic). Quarry 13, Canyon City, Colorado.

Marsh, Amer. Journ. Sci. (3), XXXIV, 1887, p. 415, pl. 8, figs. 4–6; Sixteenth Ann. Rept. U. S. Geol. Surv., 1896, p. 193, pl. 50, figs. 4–6.

97. **Stylemys nebrascensis** Leidy. Type.
Part of the carapace and plastron. White River (Oligocene). Bad Lands, White River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., 1851, p. 172.

See Testudo nebrascensis.

94. **Stylemys nebrascensis** Leidy. See Testudo nebrascensis.

98. **Stylemys nebrascensis** Leidy. See Emys hemispherica and Testudo hemispherica.

93. **Stylemys niobrarensis** (Leidy). See Testudo niobrarensis. (Also catalogue numbers 954, 956, 959, 980.)

983. **Testudo crassiscutata** Leidy. Type.
Anterior and posterior parts of the plastron, tibia, and femur. Pliocene. Peace Creek, Florida.

Leidy, Trans. Wagner Free Inst. Sci. Phila., II, 1889, p. 31, pl. 6, figs. 4–7.

98. **Testudo hemispherica** (Leidy). Type.
Carapace and plastron. White River (Oligocene). Bad Lands, White River, South Dakota.

Leidy, Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 570, pl. 12B, figs. 1, 2.

=Stylemys nebrascensis.
See Emys hemispherica.

2127. **Testudo klettiana** Cope. Type.
Caudal marginal bone. Loup Fork (Miocene). New Mexico.

Cope, Ann. Rept. Chief of Engineers, U. S. A., II, 1875, p. 995; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 285, pl. 67, fig. 3.

5367. **Testudo klettiana** Cope. Plesiotypes.
(1) Vertebral, (2) pygal, and (3) costal bones representing
5454. three individuals. "Loup Fork" (Miocene). New
5455. Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, pl. 67, (1) fig. 4; (2) fig. 5; (3) fig. 6.

97. **Testudo nebrascensis** (Leidy). Type.

Leidy, Owen's Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 567, pl. 12A, figs. 1, 2.

=Stylemys nebrascensis.

94. **Testudo nebrascensis** (Leidy). Plesiotype.
Carapace and plastron. White River (Oligocene). Bad Lands, White River, South Dakota.

Leidy, Smithsonian Contrib. to Knowl., VI, Art. VII, 1854, p. 104, pl. 19, fig. 3.

=Stylemys nebrascensis.

93. **Testudo niobrarensis** Leidy. Plesiotypes.
954. (1) Posterior portion of carapace; (2) distal end of left
956. femur; (3) anterior part of carapace; (4) distal portion of
959. right humerus; (5) last vertebral and pygal plates.
980. Loup Fork (Upper Miocene). Niobrara River, Nebraska.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 225 (as Stylemys niobrarensis), p. 340, (1) pl. 3, fig. 6; (2) pl. 19, fig. 6; (3) pl. 3, fig. 4; (4) pl. 19, fig. 8; (5) pl. 3, fig. 5.

=Stylemys niobrarensis.

2126. **Testudo undata** Cope. Type.
Marginal bones, acetabulum, and portion of pelvis. Loup Fork (Miocene). New Mexico.

Cope, Ann. Rept. Chief of Engin., U. S. A., II, 1875, p. 994; Rept. U. S. Geog. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 283, pl. 67, figs. 1, 2.

219. **Thespesius occidentalis** Leidy. Cotypes.
to Proximal median phalanx, anterior and posterior caudal.
221. Laramie (Cretaceous). Grand River, South Dakota.

Leidy, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 311; Trans. Amer. Phil. Soc., XI, 1860, p. 151, pl. 10, figs. 1–7.

2414. **Thespesius occidentalis** Leidy. See Claosaurus annectens
3418. and Trachodon annectens.
5370.

3903. **Toxochelys latiremis** Cope. See Cynocercus incisus?

2414. **Trachodon annectens** (Marsh). Type.

Lucas, Smithsonian Misc. Coll. (Quart. issue) XLV 1903, pp. 317–330, pl. 72.

=Thespesius occidentalis.
See Claosaurus annectens.

5370. **Trachodon annectens** (Marsh). Plesiotype.

Lucas, Smithsonian Misc. Coll. (Quart. issue), XLV, 1903, p. 319, text fig. 41.

=Thespesius occidentalis.
See Claosaurus annectens.

4928. **Triceratops calicornis** Marsh. Type.

Greater part of skull, predentary, portion of atlas, presacral vertebræ, part of sacrum, pubes, pieces of ribs, and ossified tendons. Laramie (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (4), VI, 1898, p. 92.

1201. **Triceratops elatus** Marsh. Type.

Skull, lacking part of right side. Laramie (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLII, 1891, p. 265.

2410. **Triceratops galeus** Marsh. Type.

Horn core, ~~vertebræ~~, and fragment of skull. Laramie (Cretaceous). Five miles from Brighton, Colorado.

Marsh, Amer. Journ. Sci. (3), XXXVIII, 1889, p. 174

4720. **Triceratops obtusus** Marsh. Type.

Jaws, nasal horn core, vertebræ, and fragment of skull. Laramie (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (4), VI, 1898, p. 92.

4800. **Triceratops prorsus** Marsh. Plesiotypes.
4842. (1) Right coracoid and scapula, atlas, axis, cervicals, dorsals, sacrum, caudals, femora, tibiæ, humerus, ulnæ, ribs, pubes, and ilium. Laramie (Cretaceous). Converse County, Wyoming.

Marsh, Amer. Journ. Sci. (3), XLI, 1891, pp. 177, 178, pl. 3, figs. 3–6; pl. 4; pl. 5, figs. 1–6; pl. 6, figs. 1–3; pl. 7, figs. 2–4; pl. 8, figs. 1–3; Sixteenth Ann. Rept. U. S. Geol. Surv., 1896, p. 218, pls. 64. 65, 66, figs. 1–3; pl. 67, figs. 2–4; pl. 68.

2575. **Trionyx cariosus** Cope. Cotypes.
5456. (1) Fragmentary carapace and plastron bones; (2) distal portion of costal bone. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 44, pl. 26, (1) figs. 5–9; (2) fig. 10.

4122. **Trionyx concentricus** Cope. Type.

Portions of carapace. Bridger (Eocene). Cottonwood Creek, Wyoming.

Cope, Pal. Bull. No. 1, 1872, p. 2; Proc. Amer. Phil. Soc., XII, 1872. p. 461; Rept. U. S. Geol. Surv. Terr., III, 1884, p. 118, 120, pl, 16, figs. 3–6.

990. **Trionyx foveatus** Leidy. Cotype.
Costal plate. Laramie (Cretaceous). Long Lake, Nebraska.

Leidy, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 73; Trans. Amer. Phil. Soc., XI, 1860, p. 148, pl. 11, fig. 3.

96. **Trionyx guttatus** Leidy. Type.
Part of carapace. Bridger (Eocene). Church Buttes, Uinta County, Wyoming,

Leidy, Proc. Acad. Nat. Sci. Phila., 1869, p. 66; Rept. U. S. Geol. Surv. Terr., I, 1873, p. 176, pl. 9, fig. 1

1113. **Trionyx leptomitus** Cope. Type.
Part of carapace. Wasatch (Eocene). New Mexico.

Cope, Rept. to Engin. Dept. U. S. A., 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 44, pl. 26, figs. 1–3.

1110. **Trionyx leptomitus** Cope. Paratypes.
5366. (1) Parts of carapace; (2) right hyposternal. Wasatch (Eocene). New Mexico.

Cope, Rept. to Engin. Dept. U. S. A., 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid. IV, Pt. II, 1877, p. 44, (1) pl. 25, figs. 27–31; (2) pl. 26, fig. 4

2581. **Trionyx radulus** Cope. Type.
Portions of costal and dorsal plates. Wasatch (Eocene). Gallinas River, New Mexico.

Cope, Syst. Cat. Vert. Eocene New Mexico, 1875, p. 35; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 45, pl. 26, figs. 11–16.

2358. **Trionyx vagans** Cope. Type.
Costal bones. Laramie (Cretaceous). Colorado.

Cope, Ann. Rept. Geol. and Geogr. Surv. Terr. for 1873, 1874, p. 453.

1112. **Trionyx ventricosus** Cope. Cotypes.
5460. (1) Parts of carapace; (2) left hyposternal. Wasatch (Eocene.) New Mexico.

Cope, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 45, pl. 64, figs. 7, 11–12.

977. **Trionyx** sp. undet.
Costal plate. Eocene. Little Sandy Creek, Wyoming.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, pl. 16, fig. 12.

41. **Tylosaurus dyspelor** (Cope). Type.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 271, pl. 35, figs. 1–11; pl. 36, fig. 16.

See Liodon dyspelor.

43. **Tylosaurus proriger** (Cope). Plesiotypes.
3885. (1) Caudal vertebra; (2) tooth; (3) fragments of jaw and
3891. splenial bone; (4) extremity of snout. Niobrara (Cre-
3894. taceous). Smoky Hill River, Kansas.

Leidy, Rept. U. S. Geol. Surv. Terr., I, 1873, p. 274, (1) pl. 36, figs. 1, 2; (2) fig. 3; (3) pl. 35, fig. 13; (4) pl. 35, fig. 12.

2585. **Typothorax coccinarum** Cope. Type.
Part of right maxillary, fragment of vertebra, and parts of two dermal scuta. Triassic. Gallinas Creek, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 265; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 30, pl. 22, figs. 1–5.

2586. **Typothorax coccinarum** Cope. Paratype.
Broken tooth, dermal plates, and coprolites. Triassic. Gallinas Creek, New Mexico.

Cope, Proc. Acad. Nat. Sci. Phila., 1875, p. 265; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. II, 1877, p. 30, pl. 22, figs. 6–9.

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SECTION III.

CATALOGUE OF THE TYPES AND ILLUSTRATED SPECIMENS OF FOSSIL PLANTS IN THE DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM.

INTRODUCTION.

The following catalogue is an alphabetical enumeration of the paleobotanical specimens in the collections of the U. S. National Museum, which have been used as bases for new genera and species of fossil plants, or for purposes of illustration. It gives the names, authorities, and catalogue numbers of the specimens, together with the localities and geological horizons whence they came, with the proper citations of the publications wherein they were described and figured. Where a species has been subsequently transferred to another genus or species a cross reference is given to the earlier name.

In a few cases some of the types and illustrations are composite. It has, therefore, been impossible always to distinguish the specimens of a single type, or the specimens that have been used for illustration. In all such cases the numbers of every specimen used by the author in the description of the type (so far as could be determined) are given.

The material for the catalogue has been compiled by Dr. A. C. Peale, with the cooperation of Mr. David White and Dr. F. H. Knowlton, and the manuscript prepared by Mrs. M. S. F. Jouy and the Misses L. M. Graves and M. W. Moodey.

CATALOGUE OF THE TYPES AND ILLUSTRATED SPECIMENS OF FOSSIL PLANTS IN THE DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM.

3249. **Abietites angusticarpus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 263, pl. 133, fig. 1.

7374. **Abietites angusticarpus** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff on east bank Oak Creek, two miles below Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 671, pl. 163, fig. 14.

8245. **Abietites carolinensis** Fontaine. Type.
Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 309, pl. 47, fig. 1.

See Pachypteris sp. and Palissya carolinensis.

6933. **Abietites cretacea** Newberry. Type.
Dakota (Cret.). Whetstone Creek, Colfax County, New Mexico.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 18, pl. 14, fig. 5.

64. **Abietites dubius** Lesquereux. Types.
66. Laramie (Cret.). Spring Canyon, near Fort Ellis, Montana.
67.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 81, pl. 7, figs. 19, 22–24.

65. **Abietites dubius** Lesquereux. Types.
68. Laramie (Cret.). Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 81, pl. 7, figs. 20, 21.

=Sequoia reichenbachi.

598. **Abietites earnestinæ** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 49, pl. 1, fig. 7.

See Pterophyllum haydenii (part).

3272. **Abietites ellipticus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 263, pl. 132, figs. 8, 9; pl. 133, figs. 2–4; pl. 168, fig. 8.

3743. **Abietites linkii** (Roemer) Dunker. Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 268, pl. 37, fig. 2.

3284. **Abietites macrocarpus** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 262, pl. 132, fig. 7.

63. **Abietites setiger** Lesquereux. (Rootlets.) Illustrated specimen.
Livingstone (Cret.). Six miles above Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 82, pl. 7, fig. 18.

4413. **Acacia lamarensis** Knowlton. Type.
Miocene (Tert.). East bank Lamar River between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 730, pl. 98, fig. 6.

4483. **Acacia macrosperma** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Bed No. 7, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 729, pl. 98, fig. 8.

2412. **Acacia oregoniana** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 14, pl. 5, fig. 4.

486. **Acacia septentrionalis** Lesquereux. Type.
Green River (Tert.). Near Costello's Ranch (Florissant) Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 418; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 299, pl. 59, fig. 9.

4412. **Acacia wardii** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Bed No. 4, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 730, pl. 98, fig. 7.

3321. **Acaciæphyllum longifolium** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 279, 280, pl. 137, fig. 6; pl. 138, figs. 1–3.

3444. **Acaciæphyllum microphyllum** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 280, pl. 138, fig. 5.

3256. **Acaciæphyllum spatulatum** Fontaine. Type.
3903. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 280, pl. 138, figs. 4, 6–9.

3195. **Acaciæphyllum variabile** Fontaine. Type.
Potomac (Low. Cret.). Covington street, Baltimore.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 281, pl. 170, fig. 7.

383. **Acer æquidentatum** Lesquereux. Illustrated specimen.
Green River? (Tert.). Confluence of White and Green rivers, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 262, pl. 48, fig. 1.

2413. **Acer bendirei** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, pp. 14, 26, pl. 5, fig. 5; pl. 6, fig. 1; pl. 7, fig. 1; pl. 8, fig. 1.

7576. **Acer bendirei** Lesquereux. Illustrated specimen.
Miocene (Tert.). Left bank of Columbia River near the mouth of Moffat's Creek, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 49, pl. 6, fig. 4.

2415. **Acer dimorphum** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 15, pl. 9, fig. 1.

8502. **Acer gigas** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mt. Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 76, pl. 14, fig. 1.

1582. **Acer indivisum** Lesquereux. Type.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, pp. 180, 181, pl. 36, figs. 6, 9.

=Acer lesquereuxii.

4159. **Acer indivisum** Weber. Illustrated specimen.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 66, pl. 29, fig. 5.

1582. **Acer lesquereuxii** Knowlton. Type.
Green River (Tert.). Uinta County, formerly but wrongly called Randolph County, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 26.

See Acer indivisum Lesquereux.

8498. **Acer medianum** Knowlton. Types.
8499. Mascall beds, Miocene (Tert.). Van Horn's Ranch, and twelve miles west of Mt. Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 76, pl. 14, figs. 4, 5.

8500. **Acer minor** Knowlton. Types.
8501. Mascall beds, Miocene (Tert.). White Hill, east of Van Horn's Ranch, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 76, pl. 14, figs. 2, 3.

2417. **Acer minor** Knowlton. Type.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Knowlton, Bull. No. 204, U. S. Geol Surv., 1902, p. 76.

See Acer sp. (fruits of).

8494 to 8497. **Acer oregonianum** Knowlton. Types.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 75, pl. 13, figs. 5–8.

33644. **Acer oregonianum** Knowlton. Types.
33645. (2417) Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 75.

See Acer sp. (fruits of).

30086. **Acer trilobatum** var. Knowlton. Illustrated specimen.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 155, pl. 29, fig. 2.

384. **Acer trilobatum productum?** (Al. Braun) Lesquereux.
385. Illustrated specimens.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 261, pl. 48, figs. 2, 3a.

5397. **Acer trilobatum productum** (Al. Braun) Heer
Illustrated specimen.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 227, pl. 9, fig. 3.

8310. **Acer trilobatum productum?** (Al. Braun) Heer.
Illustrated specimen.
Payette formation (Miocene). Two miles southeast of Marsh post-office, Boise City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 733, pl. 102, fig. 3.

4157. **Acer trilobatum tricuspidatum** (Al. Braun) Heer. Illustrated specimen.
Fort Union (Tert.). Little Missouri, Dakota.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 66, pl. 29, fig. 4.

4158. **Acer trilobatum tricuspidatum** (Al. Braun) Heer. Illustrated specimen.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 66, pl. 29, fig. 3.

4407. **Acer vivarium** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Bed No. 3, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 735, pl. 98, fig. 4.

7069. **Acer** sp.? Newberry.
Upper Eocene (Tert.). Bridge Creek, Oregon.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 115, pl. 46, fig. 8.

1832. **Acer** sp. Lesquereux.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 181, pl. 36, fig. 7.

5124. **Acer** sp. Knowlton (fruits of.)
Fort Union (Tert.). Crescent Hill, above Yancey's, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 736, pl. 98, fig. 5.

2417. **Acer** sp. Lesquereux (fruits of).
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregón.
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 15, pl. 6, figs. 2, 3; pl. 7, fig. 2.
=Acer oregonianum (part).
=Acer minor (part).

3453. **Aceriphyllum aralioides** Fontaine. Type.
Potomac (Low. Cret.), 72d milepost, near Brooke, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 321, pl. 163, fig. 8.

720. **Acerites menispermifolius** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.
Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 101.
=Menispermites menispermifolius.
See Menispermites acerifolia.

50086 to 50088. **Acerites multiformis** Lesquereux. Types.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 156, pl. 34, figs. 1–9.

129. **Acorus brachystachys** Heer. Illustrated specimens.
130. Laramie ? (Cret.). Carbon, Wyoming.
131. Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, pp. 105, 106, pl. 14, figs. 14, 15, 17.

30910. **Acrostichites [Acrostichides] densifolius** Fontaine. Type.
Triassic. Clover Hill, Richmond Coal Field, Virginia.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 34.

8203. **Acrostichites egyptiacus** (Emmons) Fontaine. Type.
Triassic. Egypt, Chatham County, North Carolina.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 99, pl. 48, fig. 8.
See Sphenopteris egyptiaca.

3480. **Acrostichites [Acrostichides] linnæfolius** (Bunbury) Fon-
30930. taine. Types.
Triassic. Gowry shaft, Midlothian, Richmond Coal Field, Virginia.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 25, pl. 6, fig. 3; pl. 7, figs. 1–4; pl. 8, fig. 1; pl. 9, fig. 1.

3481. **Acrostichites [Acrostichides] microphyllus** Fontaine.
30931 Types.
to Triassic. Clover Hill, Richmond Coal Field, Virginia.
30934. Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 33, pl. 7, fig. 5; pl. 10, fig. 2; pl. 11, fig. 4; pl. 12, fig. 3.

8209. **Acrostichites oblongus** Emmons. Type.
Triassic. Ellingtons, near Lockville, North Carolina.
Emmons, Geol. Rept. Midland Counties of North Carolina, 1856, p. 326, pl. 4, figs. 6, 8; Amer. Geology, VI, 1857, p. 101, pl. 4, figs. 6, 8.
=Lonchopteris oblonga.

30915. **Acrostichites [Acrostichides] rhombifolius** Fontaine.
30916. Types.
Triassic. Carbon Hill, Richmond Coal Field, Virginia.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 29.
=Acrostichites tenuifolius.

8215. **Acrostichites rhombifolius** Fontaine. Illustrated specimen.
Triassic. Haywood, Chatham County, North Carolina.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 105, pl. 49, fig. 7.
=Acrostichites tenuifolius.

3482. **Acrostichites [Acrostichides] rhombifolius rarinervis**
30935. Fontaine. Types.
30936. Triassic. Clover Hill, Richmond Coal Field, Virginia.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 32, pl. 13, fig. 3.

8215. **Acrostichites tenuifolius** (Emmons) Fontaine. Type.
Triassic. Haywood, Chatham County, North Carolina.
Fountaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 287, pl. 39, fig. 4.
See Odontopteris tennifolius.

30915. **Acrostichites tenuifolius** (Emmons) Fontaine.
30916. Supplemental type.
Triassic. Carbon Hill, Richmond Coal Field, Virginia.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 287.

See Acrostichites [Acrostichides] rhombifolius.

3356. **Acrostichopteris densifolia** Fontaine. Type.
3892. Belt and Covington streets, Baltimore, Maryland; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 107, pl. 94, fig. 4; pl. 170, fig. 11; pl. 171, figs. 2, 6; pl. 172, fig. 13.

3293. **Acrostichopteris longipennis** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 107, pl. 170, fig. 10; pl. 171, figs. 1, 5, 7.

3957. **Acrostichopteris parcelobata** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 108, pl. 94, figs. 6, 7, 11, 14.

3893. **Acrostichopteris parvifolia** Fontaine. Type.
3294. Potomac (Low. Cret.). Belt and Covington streets, Baltimore; fishing hut above Dutch Gap Canal; entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 108, pl. 94, figs. 5, 9, 10, 12; pl. 171, figs. 3, 4; pl. 172, fig. 14.

7013 **Acrostichum hesperium** Newberry. Types.
to Green River (Tert.). Green River, Sweetwater County,
7016. Wyoming.

Newberry, Proc. U. S. Nat. Mus., V., 1883, p. 503; Mon. XXXV, U. S. Geol. Surv., 1898, p. 6, pl. 61, figs. 2–5.

7609. **Acrostichum simulatum** Knowlton. Type.
Miocene (Tert.). Coal Creek, Lane County, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 37, pl. 1, fig. 1.

8246. **Actinopteris quadrifolia** (Emmons) Fontaine.
Illustrated specimen.
Triassic. Haywood, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 310, pl. 47, fig. 2.

See Actinopteris quadrifoliata.

8246. **Actinopteris quadrifoliata** Fontaine. Type.
Triassic. Haywood, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 121, pl. 52, fig. 3.

=Actinopteris quadrifolia.

1615. **Adiantites gracillimus** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 137, pl. 21, fig. 8.

30087. **Æsculus arctica** Knowlton. Type.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 155, pl. 30.

8519. **Æsculus simulata** Knowlton. Types.
8520. Mascall beds, Miocene (Tert.). Twelve miles west of Mt. Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv. 1902, p. 78, pl. 15, figs. 1, 2.

1586. **Ailanthus longe-petiolata** Lesquereux. Types.
1587. Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 197, pl. 40, figs. 6, 7.

8228. **Albertia latifolia** Emmons. Type.
Triassic. Lockville, Chatham County, North Carolina.

Emmons, Am. Geology, VI, 1857, p. 126, fig. 95.

=Otozamites carolinensis.

13066. **Alethopteris ambigua** Lesquereux. Types.
13067. Cherokee, Des Moines (Penn.). Clinton, Henry County,
30855. Missouri, and Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 31, figs. 1, 1a, 2, 3; Text, I, 1880, p. 182.

3590. **Alethopteris ambigua** Lesquereux. Illustrated specimen.
5634. Lower Coal Measures (Penn.). Pitcher's and Owen's Coal Mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 113, pl. 37, figs. 3, 4; pl. 41, fig. 9.

12244. **Alethopteris crassa** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 748, pl. 98, figs. 5, 5a.

11886. **Alethopteris evansii** Lesquereux. Types.
to Walden (Penn.). Tracy City and Rockwood, Tennessee.
11890.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 834.

11964. **Alethopteris gibsoni** Lesquereux. Type.
Pennsylvanian. Danville, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 28, fig. 4; Text, I, 1880, p. 183.

12092. **Alethopteris helenæ** Lesquereux. Type.
Pottsville (Penn.). Helena, Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P Text, I, 1880, p. 179.

12542. **Alethopteris lanceolata** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Rept. Geol. Surv. Illinois, IV, 1870, p. 398, pl. 13, fig. 1.

=Pecopteris lanceolata.

2217. **Alethopteris lonchitica angustifolia** Lesquereux. Type.
Pottsville (Penn.). Warrior Creek, Jefferson County, Alabama.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 27.

12174 to 12177. **Alethopteris robusta** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 835.

11942. **Alethopteris rugosa** Lesquereux. See Callipteridium rugosum.

3594. **Alethopteris serlii** (Brongniart) Goeppert.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 117, pl. 37, fig. 1.

12098 to 12100. **Alethopteris serlii** (Brongniart) Goeppert.
Illustrated specimens.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 29, figs. 2, 2a, 3, 4; Text, I, 1880, p. 176.

3591b. 3594a. **Alethopteris serlii missouriensis** David White. Type.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 118, pl. 37, fig. 2; pl. 42, fig. 5.

409 to 411. 327a. 765. **Aleurites eocenica** Lesquereux. Types.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 397.

=Grewiopsis eocenica.
See Grewiopsis saportanea.

167. 550. **Alnites inæquilateralis** Lesquereux. Types.
Green River (Tert.). Alkali Station, Wyoming.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., 1875 [1876], p. 381; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 381; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 141, pl. 62, fig. 13.

=Alnus inæquilateralis.

645a. **Alnites quadrangularis** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, 1874, p. 62, pl. 4, fig. 1.

=Hamamelites quadrangularis.
See Populites quadrangularis.

7124. **Alnus alaskana** Newberry. Type.
Eocene (Tert.). Kootznahoo Archipelago, Alaska.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 509; Mon. XXXV, U. S. Geol. Surv., 1898, p. 65, pl. 48, fig. 8.

159. **Alnus americana** Ettingshausen. Type.
Laramie (Cret.). Evanston, Wyoming.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 15; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 25.

=Betula stevensoni.
See Betula goepperti and B. caudata.

167. **Alnus inæquilateralis** (Lesquereux). Types.
550. Green River (Tert.). Alkali Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 151.

See Alnites inæquilateralis.

645. **Alnus kansaseanus** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, 1874, p. 62, pl. 30, fig. 8.

=Quercus kanseana.
See Hamamelites kansaseanus.

166a. **Alnus kefersteinii** (Göppert) Unger. Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 140, pl. 18, fig. 7.

166. **Alnus kefersteinii** (Göppert) Unger. Illustrated specimen.
Green River (Tert.). Near Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 140, pl. 64, fig. 11.

8551. **Alnus macrodonta** Knowlton. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 42, pl. 4, fig. 1.

7003. **Alnus serrata** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 55; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, fig. 11; Mon. XXXV, U. S. Geol. Surv., 1898, p. 66, pl. 33, fig. 11.

7091. **Alnus serrulata fossilis** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV. U, S. Geol. Surv., 1898, p. 66, pl. 46, fig. 6.

7092. **Alnus** sp.? Newberry (fruit of).
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 67, pl. 46, fig. 7.

30084. **Alnus** sp. Knowlton.
30093. Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 155, pl. 28, fig. 2; pl. 33, fig. 4.

5614. **Aloiopteris erosa** (Gutbier) David White.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 70, pl. 23, fig. 6.

12386. **Aloiopteris erosa** (Gutbier) David White.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 70, pl. 24, fig. 3A.

6465 to 6470. **Aloiopteris winslovii** David White. Types.
McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 487; Mon. XXXVII, U. S. Geol. Surv., 1899, p. 72.

=Aloiopteris (Corynepteris?) winslovii.

5610. **Aloiopteris (Corynepteris?) winslovii** David White.
5611. Illustrated specimens.
5612. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.
5721. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 72, pl. 22, fig. 2; pl. 23, figs. 1–3.

5689. **Aloiopteris (Corynepteris?) winslovii** David White.
5690. Illustrated specimens.
Cherokee, Des Moines (Penn.). Hobb's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 72, pl. 23, figs. 4, 5.

5609. **Aloiopteris (Corynepteris?) winslovii** David White.
5613. Illustrated specimens.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 72, pl. 22, figs. 1, 3.

See Pecopteris sp.

576. **Amelanchier similis** Newberry. Type.
Fort Union (Tert.). Yellowstone River, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 48; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 25, fig. 6; Mon. XXXV, U. S. Geol. Surv., 1898, p. 111, pl. 40, fig. 60.

1908. **Amelanchier typica** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 198, pl. 40, fig. 11.

633. **Ampelophyllum ovatum** Lesquereux. Types.
633b. Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1874 (1876), p. 355.

See Celtis ? ovata and Populites ovata.

361. **Ampelopsis tertiaria** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Suppl. Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1871 (1872), p. 7; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874, p. 242, pl. 43, fig. 1.

668. **Andromeda affinis** Lesquereux. Type.
Laramie (Cret.). Spring (Rocky) Canyon near Fort Ellis, Montana.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 348, pl. 3, fig. 5; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 60, pl. 2, fig. 5.

2422. **Andromeda ? (Leucothoe) crassa** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 16.

8511. **Andromeda crassa** Lesquereux. Type.
(2422) Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 83, pl. 16, fig. 3.

1580. **Andromeda delicatula** Lesquereux. Types.
1581. Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 175, pl. 34, figs. 10, 11.

335. **Andromeda grayana** Heer. Illustrated specimen.
Livingstone (Cret.). Six miles above Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 234, pl. 40, fig. 4.

2352. **Andromeda linearifolia** Lesquereux. Type.
Denver (Cret.). Ryolite beds, Silver Cliff, Colorado.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p, 42, pl. 3, figs. 2, 3.

638. **Andromeda parlatorii** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, pl. 28, fig. 15.

50113. **Andromeda parlatorii longifolia** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 116, pl. 64, fig. 19.

50114. **Andromeda wardiana** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 119, pl. 64, fig. 17.

30837. to 30847. **Aneimites (Wardia) fertilis** David White. Types.
Lower Pottsville (Penn.). Near Nuttall, West Virginia.
White, Smithsonian Misc. Coll., Quart., XLVII, 1904 [1905], p. 323, pls. 47, 48.

6953. to 6956. **Anemia perplexa** Hollick. Illustrated specimens.
Laramie (Cret.). Point of Rocks, Sweetwater County, Wyoming.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 3, pl. 63, figs. 1–4.

29. **Anemia perplexa** Hollick. See Gymnogramma haydenii.

3332. **Angiopteridium auriculatum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; roadside near Potomac Run, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 113–114, pl. 7, figs. 8–11; pl. 28, fig 1.

4001. **Angiopteridium canmorense** Dawson. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.
Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 239, pl. 66, fig. 4.
See Angiopteridium nervosum?

3335. **Angiopteridium densinerve** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 115, pl. 29, fig. 4.

3331. **Angiopteridium dentatum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 117, pl. 30, figs. 6, 7.

3334. **Angiopteridium ellipticum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 114, pl. 29, fig. 3.

3419 **Angiopteridium nervosum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 114, pl. 29, fig. 2.

4001. **Angiopteridium nervosum?** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.
Fontaine, in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.
=Angiopteridium canmorense.

3336. **Angiopteridium ovatum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 115–116, pl. 29, figs. 6, 7.

3333. **Angiopteridium strictinerve** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 116, pl. 29, figs. 8, 9.

4000. **Angiopteridium strictinerve ?** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine, in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Nageiopsis longifolia.

3416. **Angiopteridium strictinerve latifolium** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 116, pl. 30, figs. 1, 5.

3963. **Angiosperm ?** sp.? Fontaine (ament of).
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 272, pl. 135, fig. 16.

6905. **Anisophyllum semialatum** Lesquereux. Types.
6908. Dakota (Cret.). Near Beatrice, Gage County, Nebraska.
6909.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 98, pl. 6, figs. 2, 4, 5.

See Quercus semialatus.

17851. **Annularia cuspidata** Lesquereux. Type.
Pottsville (Penn.). Rushville, Ohio.

Lesquereux, Coal Flora, Second Geol, Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 725, pl. 92, figs. 7, 7a.

17841. **Annularia emersoni** Lesquereux. Type.
Monongahela (Penn.). St. Clairsville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 50; III, 1884, p. 725, pl. 92, figs. 6, 6a.

See Annularia sphenophylloides minor.

17862. **Annularia longifolia** Brongniart. Illustrated specimens.
17863. Allegheny (Penn.). Mazon Creek, Illinois.
17864.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 2, figs. 1, 2; Text, I, 1880, p. 45; III, 1884, p. 706.

=Annularia stellata.

17860. **Annularia minuta** Brongniart? Illustrated specimen.
Dunkard (Permo-Carb.). Blacksville, Monongalia County, West Virginia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 725, pl. 92, figs. 8, 8a.

17970. **Annularia sphenophylloides** (Zenker) Gutbier. Illustrated specimen.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 11, fig. 8; Text, I, 1880, p. 48.

17950. **Annularia sphenophylloides intermedia** Lesquereux. Type.
Cherokee (Penn.). Lawrence, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 724.

17841. **Annularia sphenophylloides minor** Lesquereux. Type.
Monongahela (Penn.). St. Clairsville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 3, fig. 13.

=Annularia emersoni.

6516. (?) **Annularia stellata** (Schlotheim) Wood.
Illustrated specimen.
McAlester (Penn.). One mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 515, pl. 68, fig. 10.

12386b. **Annularia stellata** (Schlotheim) Wood. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 159, pl. 24, fig. 3b.

17862. **Annularia stellata** (Schlotheim) Wood.
17863.
17864.
18324. See Annularia longifolia, Bruckmannia tuberculata and Asterophyllites sp.

18147 to 18149. **Annularia tuberculata** (Brongniart) Lesquereux.
Illustrated specimens.
Pottsville (Penn.). Brewery Railroad Cut, West Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P. Text, III, 1884, p. 723, pl. 89, figs. 1, 2.

8204. **Anomozamites? egyptiacus** Fontaine. Type.
Triassic. Egypt, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 290, pl. 39, fig. 5.

3405. **Anomozamites virginicus** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run: Telegraph Station (Fredericksburg area), Virginia

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 168, pl. 30, fig. 4; pl. 31, fig. 3.

5385. **Antholithus gaudium-rosæ** Ward. Type.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 355, pl. 3, fig. 7.

1566. **Antholithes improbus** Lesquereux. Type.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 204, pl. 40, fig. 21.

50124. **Apeibopsis cyclophylla** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 180, pl. 25, fig. 6.

373 to 376. **Apeibopsis discolor** Lesquereux. Illustrated specimens. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, 1878, p. 259, pl. 46, figs. 4–7.

19566 to 19568. **Aphlebia acuminata** (Lesquereux) David White. Types. Le Roy (Penn.). Garnett, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 100.

5546. **Aphlebia germari** Zeiller. Illustrated specimen. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 106, pl. 46.

19599. **Aphlebia subgoldenbergii** David White. Type. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 110, pl. 47, fig. 7.

5727. **Aphlebia** sp. David White. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 112, pl. 45, fig. 1.

171. **Apocynophyllum lesquereuxii** Ettingshausen. Type. Laramie? (Cret.). Raton Mountains, New Mexico.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 32; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 51.

See Quercus neriifolia.

172. **Apocynophyllum pealei** Ettingshausen. Type. Green River (Tert.). Near Florissant, Colorado.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 32; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 51.

1605 to 1609. **Apocynophyllum scudderi** Lesquereux. Types. Green River (Tert.) Alkali Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 172, pl. 45a, figs. 1–5.

50126. **Apocynophyllum soridum** Lesquereux. Type. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv. 1891, p. 109, pl. 64, fig. 11.

671. **Aralia concreta** Lesquereux. Types.
672. Dakota (Cret.). Clay Center, Kansas.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 394; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 349; figs. 3, 4; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 64, pl. 9, figs. 3, 4.

See Aralia semiorbiculata.

4135 to 4138. **Aralia digitata** Ward. Type. Fort Union (Tert.). Head of Clear Creek, twenty-four miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 62, pl. 27, figs. 3–5.

2424. **Aralia digitata** Ward. Illustrated specimen.
Eocene (Tert.). Cherry Creek, Wasco County, Oregon.
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 20, pl. 11, fig. 4.

3300. **Aralia dubia** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 314, pl. 157, figs. 1, 7.
=Aralia fontainei.

3300. **Aralia fontainei** Knowlton. Type.
Potomac (Low. Cret.). Deep Bottom, Virginia.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 37.
See Aralia dubia.

330. **Aralia? gracilis** Lesquereux. Type.
Laramie (Cret.). Bridger's Pass, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, 1878, p. 236, pl. 39, fig. 1.
See Liquidambar gracilis.

2741. **Aralia groenlandica** Heer. Illustrated specimens.
50087. Dakota (Cret.). Near Fort Harker, Kansas.
50088. Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 134, pl. 54, figs. 1–3.

2425. **Aralia lasseniana** Lesquereux. Type.
Eocene? Lassen County, California.
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 28, pl. 14, fig. 5.

4139. **Aralia looziana** Saporta and Marion. Illustrated specimen.
Fort Union (Tert.). Clear Creek, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 61, pl. 27, fig. 2.

7019. **Aralia macrophylla** Newberry. Type.
Green River (Tert.). Green River, Sweetwater County, Wyoming.
Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 513; Mon. XXXV, U. S. Geol. Surv., 1898, p. 121, pl. 67, fig. 1.

50079. **Aralia masoni** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 133, pl. 15, fig. 4.

332. **Aralia notata** Lesquereux. Types.
332a. Fort Union (Tert.). Elk Creek, near Yellowstone National Park.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 237, pl. 39, figs. 2, 4.
See Platanus dubia.

331. **Aralia notata** Lesquereux. Illustrated specimen.
Denver (Cret.). Mount Bross, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 237, pl. 39, fig. 3.

4140. **Aralia notata** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 60; pl. 27, fig. 1.

4232. **Aralia notata** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 745, pl. 100, fig. 1.

6911. **Aralia (?) quinquepartita** Lesquereux. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 123, pl. 9, fig. 1.

673. to 676. **Aralia saportanea** Lesquereux. Illustrated specimens.
Dakota (Cret.). South of Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 61, pl. 8, figs. 1, 2.

671. 672. **Aralia semiorbiculata** Lesquereux. Types.
Dakota (Cret.). Clay Center, Kansas.
Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 395.
= Aralia concreta.

4341. **Aralia serrulata** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, top of bluff, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 747, pl. 101, fig. 3.

677. **Aralia towneri** Lesquereux. Type.
Dakota (Cret.). Clay Center, Kansas.
Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 394; Ann. Rept. U. S. Geol. Surv. Terr., 1874 [1876], p. 349, pl. 4, fig. 1; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 62, pl. 6, fig. 4.

575. 6975. **Aralia triloba** Newberry. Types.
Fort Union (Tert.). Fort Clark, North Dakota.
Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 58; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 25, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 123, pl. 40, figs. 4, 5.

670. **Aralia tripartita** Lesquereux. Type.
Dakota (Cret.). Clay County, Kansas.
Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 348, pl. 1, fig. 1.
=Sterculia tripartita.
See Sterculia obtusiloba.

3978. **Aralia wellingtoniana vaughnii** Knowlton. Type.
Woodbine, Dakota (Low. Cret.). Arthur's Bluff, Red River, Lamar County, Texas.
Knowlton in Hill, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. VII, 1901, p. 317.

5159. **Aralia whitneyi** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Fossil Forest Ridge, Aralia bed No. 4, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 748, pl. 99, fig. 3.

4411. **Aralia wrightii** Knowlton. Type.
Miocene (Tert.). Fossil Forest, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 745, pl. 101, fig. 1.

3357. **Araliæphyllum aceroides** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 319, pl. 156, fig. 11; pl. 162, fig. 2.

3382. **Araliæphyllum magnifolium** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 318, pl. 159, figs. 9, 10.

3361. **Araliæphyllum obtusilobum** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 317, pl. 163, figs. 1, 4; pl. 164, fig. 3.

30862. **Araucarioxylon arizonicum** Knowlton. Type.
Jurassic. Near Fort Wingate, New Mexico.

Knowlton, Proc. U. S. Nat. Mus., XI, 1888, pp. 1–4.

8178. **Araucarioxylon hoppertonæ** Knowlton. Type.
Lakota (Low. Cret.). Two miles southwest of Minnekahta Station, Fall River County, South Dakota.

Knowlton in Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 644, pls. 158, 159.

30866. **Araucarioxylon ? obscurum** Knowlton. Type.
Jurassic. Freezeout Hills, Carbon County, Wyoming.

Knowlton in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1898–99, p. 418, pl. 178.

3654. **Araucarioxylon virginicum** Knowlton. Type.
Triassic. Taylorsville, Virginia.

Knowlton, Bull. No. 56, U. S. Gool. Surv., 1889, p. 50, pl. 7, figs. 2–5.

30863. **Araucarioxylon wallacei** Knowlton. Type.
Purbeck (Upp. Jurassic). Isle of Portland, England.

Knowlton in Ward, Sixteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, p. 495, pl. 102, figs. 2–4.

30864. **Araucarioxylon webbii** Knowlton. Type.
Wealden (Low. Cret.). Hanover Point, Isle of Wight, England.

Knowlton in Ward, Sixteenth Ann. Rept. U. S. Geol. Surv., Pt I, 1896, p. 496, pl. 102, fig. 5.

30865. **Araucarioxylon woodworthi** Knowlton. Type.
Triassic. Chesterfield County, Virginia.

Knowlton, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 517, pl. 52, figs. 1–6.

3343. **Araucarites aquiensis** Fontaine. Type.
Potomac (Low. Cret.). Bank near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 264, pl. 133, figs. 8–12.

8248. **Araucarites carolinensis** Fontaine. Type.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 119, pl. 49, fig. 8.

See Lepacyclotes circularis.

7381. **Araucarites cuneatus** Ward. Type.
Lakota (Low. Cret.). John Barr's tunnel north fork of Hay Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept, U. S. Geol. Surv., Pt. II, 1899, p. 670, pl. 163, fig. 10.

3439. **Araucarites virginicus** Fontaine. Type.
Potomac (Low. Cret.). Entrance to Trents Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 263, pl. 134, fig. 7.

7337. **Araucarites wyomingensis** Fontaine. Types.
7338. Lakota (Low. Cret.). Lon Cottle's ranch, southwest of
7339. Barrett, Crook County, Wyoming.
7341. Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899,
7344. p. 669, pl. 163, figs. 1–9.

17008. **Archæopteris denticulata** Lesquereux. Type.
Pottsville (Penn.). Rushville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text III, 1884, p. 774.

16904. **Archæopteris hibernica** (Forbes) Lesquereux.
Illustrated specimen.
Catskill (Dev.). Coxton Narrows, above Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text I, 1880, p. 305, pl. 50, fig. 5.

16962. **Archæopteris macilenta** Lesquereux. Types.
16965. Catskill (Dev.). Meshoppen, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text III, 1884, p. 775.

16943. **Archæopteris minor** Lesquereux. Types.
16951. Catskill (Dev.). Coxton Narrows, above Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text I, 1880, p. 302, pl. 50, figs. 3, 4.

16980. **Archæopteris sphenophyllifolia** Lesquereux. Types.
16981. Catskill (Dev.). Meshoppen, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text III, 1884, p. 775.

2710. **Arismæa cretacea** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 38, pl. 46, fig. 1.

6993. **Aristolochia cordifolia** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 90, pl. 39.

See Catalpa crassifolia.

6994. **Aristolochia cordifolia** Newberry. Types.
6995. Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 74; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 25, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 90, pl. 40, fig. 7; pl. 60, fig. 4.

669. **Aristolochia dentata** Heer (Lesquereux). Supplemental type.
Dakota (Cret.). Tekamah, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 59.

=Aristolochites dentata.

3366. **Aristolochiæphyllum crassinerve** Fontaine. Type.
Potomac (Low. Cret.). Seventy-second milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 322, pl. 160, figs. 3–6.

669. **Aristolochites dentata** Heer. Illustrated specimen.
Dakota (Cret.). Tekamah, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, 1874, p. 87, pl. 30, fig. 6.

See Aristolochia dentata.

30787. **Arthrodendron diffusum** Ulrich. Types.
30788. Yakutat (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 138, pl. 14, figs. 1–3.

19174. **Artisia (Cordaites)** sp. Lesquereux.
Pennsylvanian. Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 81, fig. 2.

2759. **Artocarpidium cretaceum** Ettingshausen. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 86, pl. 50, fig. 7.

407. **Artocarpidium olmidæfolium?** (Unger) Lesquereux. Supplemental type.
Denver (Cret.) Golden, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 400.

=Celastrinites artocarpidiodes.

4409. **Artocarpus? quercoides** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 716, pl. 92, fig. 1.

95. **Arundo goepperti** Münster. Illustrated specimen.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 86, pl. 8, fig. 3.

96. **Arundo reperta** Lesquereux. Type.
Green River (Tert.). Near Green River Station, Wyoming.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 384; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 311; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 87, pl. 8, figs. 7, 8.

362. **Asimina eocenica** Lesquereux. Illustrated specimens.
363. Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 251, pl. 43, figs. 7, 8.

7650. **Asimina eocenica?** Lesquereux. Illustrated specimen.
Montana (Cret.). North Fork of Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 57, pl. 14, fig. 3.

721 to 726. **Aspidiophyllum trilobatum** Lesquereux. Types.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 361, pl. 2, figs. 1, 2; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, pl. 12, fig. 1; pl. 13, figs. 1–5.

3826. **Aspidium angustipinnatum** Fontaine. Types.
3269. Potomac (Low. Cret.). Entrance to Trent's Reach; fishing hut above Dutch Gap Canal; Fredericksburg; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 98, pl. 16, figs. 1, 3, 8; pl. 17, fig. 1; pl. 19, fig. 10.

=Dryopteris angustipinnata.

3152. **Aspidium angustipinnatum montanense** Fontaine. Type.
Kootanie (Cret.). Great Falls, Montana.

Fontaine, Proc. U. S. Nat. Mus., XV, 1892, p. 491, pl. 84, figs. 1, 1a.

=Dryopteris angustipinnata montanense.

3374. **Aspidium cystopteroides** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 99, pl. 16, fig. 2.

=Dryopteris cystopteroides.

3437. **Aspidium dentatum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 102, pl. 25, figs. 6, 7, 14, 15.

=Dryopteris dentata.

3391. **Aspidium dunkeri** (Schimper) Fontaine.
3324. Illustrated specimens.
3828. Potomac (Low. Cret.). Near telegraph station, banks Dutch Gap Canal; Fredericksburg; entrance to Trent's Reach; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 101, pl. 22, fig. 9; pl. 25, figs. 11, 12; pl. 26, figs. 2, 8, 9, 18; pl. 54, figs. 3, 9.

=Cladophlebis dunkeri.

3993. **Aspidium dunkeri** (Schimper) Fontaine? Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cladophlebis ungeri.

3967. **Aspidium ellipticum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run; bank near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 95, pl. 13, figs. 9, 10.

=Dryopteris elliptica.

3913. **Aspidium fredericksburgense** Fontaine. Type.
3346. Potomac (Low. Cret.). Fredericksburg; and near tele-
3325. graph station (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 94, pl. 11, figs. 1–6; pl. 12, figs. 1–6; pl. 16, fig. 9; pl. 19, figs. 6, 7.

=Dryopteris fredericksburgense.

26. **Aspidium goldianum** Lesquereux. Type.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 393.

=Lastrea goldiana.

3268. **Aspidium heterophyllum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 96, pl. 14, figs. 1–5; pl. 15, figs. 1–5.

=Dryopteris heterophylla.

3992. **Aspidium heterophyllum** Fontaine. Types.
3997. Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cladophlebis parva (part).
=Gleichenia nordenskiöldi (part).

6934. **Aspidium kennerlyi** Newberry. Types.
Puget Sound (Cret.). Nanaimo, Vancouver Island, British Columbia.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 11, pl. 16, figs. 4, 5.

=Dryopteris kennerlyi.

33641. **Aspidium lakesii** (Lesqx.) Knowlton. Illustrated specimens.
33642. Livingston (Cret.). Bear Creek, west side of Madison
33643. Range, Montana.

Knowlton, Bull. No. 105, U. S. Geol. Surv., 1898, p. 45, pl. 6, figs. 1–3.

=Dryopteris arguta.

3829. **Aspidium macrocarpum** Fontaine. Type.
Potomac (Low. Cret.). Bank of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 103, pl. 17, fig. 2.

=Dryopteris macrocarpa.

3329. **Aspidium microcarpum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 103, pl. 59, figs. 2, 12; pl. 60, figs. 6, 7.

=Dryopteris microcarpa.

3147. **Aspidium monocarpum** Fontaine. Type.
7429. Kootanie (Cret.). Great Falls, Montana.
7432.

Fontaine, Proc. U. S. Nat. Mus., XV, 1892, p. 490, pl. 83, figs. 4–6, 6a; pl. 84, figs. 3, 3a.

=Dryopteris monocarpa.

3153. **Aspidium montanense** Fontaine. Type.
Kootanie (Cret.). Great Falls, Montana.

Fontaine, Proc. U. S. Nat. Mus., XV, 1892, p. 490, pl. 82, figs. 1–3; pl. 83, figs. 1, 1a, 2, 3, 3a.

=Dryopteris montanense.

2434. **Aspidium oerstedi** Heer. Supplemental type.
Jurassic? Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32.

=Cladophlebis huttoni (part).
=Onychiopsis psilotoides (part).
=Cladophlebis alata (part).

3344. **Aspidium parvifolium** Fontaine. Types.
3822. Potomac (Low. Cret.). Fredericksburg; banks of Dutch
3823. Gap Canal; fishing hut above this canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 100, pl. 21, fig. 6; pl. 24, fig. 8; pl. 25, fig. 10; pl. 26, figs. 1, 14, 16, 17.

=Dryopteris parvifolia.

3426. **Aspidium virginicum** Fontaine. Types.
3827. Potomac (Low. Cret.). Roadside near Potomac Run; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 97, pl. 15, fig. 7; pl. 21, fig. 14.

=Dryopteris virginica.

5379. **Aspidium virginicum** Fontaine. Illustrated specimen.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 358, pl. 2, fig. 4.

=Dryopteris virginica.

3329. **Asplenіopteris adiantifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 118, pl. 16, fig. 6.

3318. **Asplenіopteris pinnatifida** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 118, pl. 22, figs. 1–3, 6, 7.

3994. **Asplenіopteris pinnatifida?** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Stanton and Diller, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Dicksonia pachyphylla.

19. **Asplenium (Diplazium) crossii** Knowlton. Types.
Denver (Cret.). Golden, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 44.

See Diplazium muelleri?

5995. **Asplenium dicksonianum** Heer. Illustrated specimen.
Dakota (Low. Cret.). Falls of Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept U. S. Geol. Surv., Pt. II, 1899, p. 704, pl. 170, fig. 1.

6007. **Asplenium dicksonianum** Heer? Illustrated specimen.
Lakota (Low. Cret.). Red Canyon west of Minnekahta, Fall River County, South Dakota.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 664, pl. 162, figs. 6–8.

2435. **Asplenium dicksonianum** Heer. Supplemental type.
Jurassic. Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32.

=Dicksonia saportana.

5233. **Asplenium erosum?** (Lesquereux) Knowlton.
Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 668, pl. 80, fig. 6.

2436. **Asplenium forsteri** Debey and Ettingshausen.
Supplemental type.
Jurassic? Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32.

=Cladophlebis huttoni.

5110. **Asplenium haguei** Knowlton. Type.
5111. Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 655, pl. 77, figs. 1, 2.

4278. **Asplenium iddingsii** Knowlton. Types.
5071. Fort Union (Tert.). Bank of Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 79, fig. 2; pl. 80, fig. 9.

5036. **Asplenium magnum** Knowlton. Types.
5070.
5087. Fort Union (Tert.). Yellowstone River, base of bluff, one-
5088. half mile below mouth of Elk Creek, Yellowstone Na-
5096. tional Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 667, pl. 79, figs. 5–8, 8a.

5067. **Asplenium remotidens** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 669, pl. 80, fig. 7.

7653. **Asplenium tenellum** Knowlton. Type.
Montana (Cret.). North Fork Dutton Creek, Carbon County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 19, pl. 3, figs. 1, 2.

2020. **Asplenium tenerum** Lesquereux. Types.
2021. Fort Union (Tert.). Bad Lands, Dakota, near Gilmore Station, U. P. R. R.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 221, pl. 46a, figs. 1, 1a.

7642. **Asplenium wyomingense** Knowlton. Type.
Montana (Cret.). North Fork Dutton Creek, Carbon County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 19, pl. 3, fig. 12.

7641. **Asplenium** sp. Knowlton.
Montana (Cret.). North Fork Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 20, pl. 3, fig. 11.

8206. **Asterocarpus falcatus** (Emmons) Fontaine. Type?
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 282, pl. 38, fig. 5.

30905. **Asterocarpus falcatus** (Emmons) Fontaine. See Asterocarpus virginiensis.

3497. **Asterocarpus penticarpa** Fontaine. Types.
30975. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 48, pl. 26, fig. 2.

30902. **Asterocarpus platyrachis** Fontaine. Type.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 46, pl. 25, fig. 3.

30905. **Asterocarpus virginiensis** Fontaine. Type.
Triassic. Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 41, pl. 24, fig. 1.

=Asterocarpus falcatus.

30907. **Asterocarpus virginiensis obtusilobus** Fontaine. Type.
Triassic. Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 45, pl. 24, fig. 4.

10254. **Asterophycus coxii** Lesquereux. Type.
Pennsylvanian. New Harmony, Indiana.

Lesquereux, Geol. Rept. Ind., 1875, p. 139, pl. 2, figs. 1, 2; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 12, pl. B, figs. 5, 6.

10255. **Asterophycus simplex** Lesquereux. Types.
to Pennsylvania. Beaver, Pennsylvania.
10257.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 1, pl. 3, figs. 7, 8; Text, I, 1880, p. 13.

18117. **Asterophyllites arkansanus** David White.
18118. Illustrated specimens.
18119. Pottsville (Penn.). Dade County, Georgia.

White, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 897.

See Asterophyllites gracilis.

17651. **Asterophyllites equisetiformis** (Schlotheim) Brongniart.
Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text I, 1880, p. 35, pl. 2, fig. 3.

6085. **Asterophyllites equisetiformis** (Schlotheim) Brongniart. Illustrated specimen.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henrys County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 151, pl. 59, fig. 1c.

18291. **Asterophyllites fasciculatus** Lesquereux. Types.
18292. Cherokee, Des Moines (Penn.). Clinton, Henry County,
18297. Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 3, figs. 1, 2; Text, I, 1880, p. 40.

=Sphenophyllum (Asterophyllites) fasciculatum.

18117. **Asterophyllites gracilis** Lesquereux. Illustrated specimens.
18118. Pottsville (Penn.). Dade County, Georgia.
18119.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 714, pl. 93, figs. 3, 5, 7.

=Asterophyllites arkansanus.

18276. **Asterophyllites longifolius** Brongniart. Illustrated specimen.
Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 716, pl. 91, fig. 2.

5673. **Asterophyllites longifolius** (Sternberg) Brongniart.
5676. Illustrated specimens.
5677. Cherokee, Des Moines (Penn.). Owen's and Pitcher's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 153, pl. 49, figs. 2–4.

18365. **Asterophyllites ovalis** Lesquereux. Illustrated specimens.
18366. Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 3, figs. 6, 7; Text I, 1880, p. 36.

18324. **Asterophyllites** sp. Lesquereux (fructified).
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 3, fig. 12.

=Annularia stellata.
See Bruckmannia tuberculata.

3181. **Athrotaxopsis expansa** Fontaine. Type.
3783. Potomac (Low. Cret.). Hillside near Potomac Run;
3851. entrance to Trent's Reach; banks of Dutch Gap Canal;
3951. fishing hut above canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 241, 242; pl. 113, figs. 5, 6; pl. 115, fig. 2; pl. 116, fig. 5; pl. 117, fig. 6; pl. 135, figs. 15, 18, 22.

3324. **Athrotaxopsis grandis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; 72d milepost near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889; pp. 240, 241, pl. 114, figs. 1–3; pl. 116, figs. 1–4; pl. 135, fig. 10.

3230. **Athrotaxopsis pachyphylla** Fontaine. Type.
3852. Potomac (Low. Cret.). Banks of Dutch Gap Canal fishing hut above Dutch Gap Canal, Virginia.

Fontaine. Mon. XV, U. S. Geol. Surv., 1889, p. 242, pl. 115, figs. 1, 3; pl. 117, figs. 1, 3–5.

3185. **Athrotaxopsis tenuicaulis** Fontaine. Type.
3853. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 241, pl. 114, figs. 4, 5; pl. 115, fig. 4; pl. 116, fig. 6; pl. 117, fig. 2.

7401. **Athrotaxopsis tenuicaulis** Fontaine. Illustrated specimens.
5967a. Lakota (Low. Cret.). East bank Oak Creek, two miles
5967b. below Robbins's Ranch, Crook County, Wyoming.
4968.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 674, pl. 164, figs. 1–4.

8428. **Baiera gracilis** (Bean) Bunbury. Illustrated specimen.
Jurassic? One hundred and eighty miles northeast of Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 168, pl. 44, fig. 2.

8254. **Baiera muensteriana** (Presl) Heer. See Baiera sp. Emmons.

30937. **Baiera multifida** Fontaine. Types.
30938. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv. 1883, p. 87, pl. 45, fig. 3; pl. 46, fig. 2.

8233. **Baiera multifida** Fontaine. Illustrated specimen.
Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 304, pl. 43, fig. 4.

8384. **Baiera palmata** Heer. Illustrated specimens.
8387. Neocomian (Cret.) or Jurassic? Cape Lisburne, Alaska.
(2437)

Lesquereux, Proc. U. S. Nat. Mus., X, 1888, p. 31, pl. 16, figs. 4, 5.

Fig. 4 = Podozamites grandifolius.
Fig. 5 = Ginkgodium ? alaskense.

8363. **Baiera palmata** Heer. Supplemental type.
(2437) Neocomian or Jurassic? Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 31.

= Nageiopsis longifolia.

8254. **Baiera** sp. Emmons.
Triassic. Lockville, Chatham County, North Carolina.

Emmons, Am. Geology, VI, 1857, p. 133, fig. 102.

= Baiera muensteriana.

3205. **Baieropsis adiantifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; roadside near Potomac Run; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 211, pl. 92, figs. 8, 9; pl. 93, figs. 1–3; pl. 94, figs. 2, 3.

7386. **Baieropsis adiantifolia** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 684, pl. 168, fig. 8.

3350. **Baieropsis adiantifolia minor** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 212, pl. 94, fig. 1.

3232. **Baieropsis denticulata** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 210, pl. 93, fig. 7.

3207. **Baieropsis expansa** Fontaine. Types.
3494. Potomac (Low. Cret.). Fredericksburg; bank of Dutch Gap
3895. Canal; fishing hut above canal; entrance to Trent's
3896. Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 207, pl. 89, figs. 1, 3; pl. 90, fig. 1; pl. 91, fig. 2; pl. 92, fig. 5.

3208. **Baieropsis foliosa** Fontaine. Type.
Potomac (Low. Cret.). Bank near Brooke, White House Bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 209, pl. 93, figs. 4–6.

3231. **Baieropsis longifolia** Fontaine. Type.
Potomac (Low. Cret.). Near Telegraph Station (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 210, pl. 91, fig. 6.

3209. **Baieropsis macrophylla** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 212, pl. 90, fig. 6.

3206. **Baieropsis pluripartita** Fontaine. Types.
3496. Potomac (Low. Cret.). Entrance of Trent's Reach; banks
3894. of Dutch Gap Canal; fishing hut above canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 208, pl. 79, fig. 4; pl. 90, figs. 2–5; pl. 91, figs. 1, 3, 4, 7; pl. 92, figs. 1, 2, 6.

7388. **Baieropsis pluripartita** Fontaine? Illustrated specimens.
7389. Lakota (Low. Cret.). Cliff north side Pine Creek, two miles west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 685, pl. 168, figs. 9–12.

3351. **Baieropsis pluripartita minor** Fontaine. Types.
3497. Potomac (Low. Cret.). Entrance to Trent's Reach; banks
3897. of Dutch Gap Canal; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geog. Surv., 1889, pp. 208, 209, pl. 91, fig. 5; pl. 92, figs. 3, 4.

1781. **Banksites lineatus** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 165, pl. 32, fig. 21.

7566. **Benzoin dilleri** Knowlton. Type.
Miocene (Tert.). Five miles north of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 46, pl. 4, fig. 3.

2697. **Benzoin venustum** (Lesquereux) Knowlton. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 47.

7046. **Berberis simplex** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Cook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 514; Mon. XXXV, U. S. Geol. Surv., 1898, p. 97, pl. 56, fig. 2.

5320. **Berchemia multinervis** (Al. Braun) Heer.
Illustrated specimen.
Fort Union (Tert.). Bull Mountains, forty miles from Billings, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 73, pl. 33, fig. 1.

5321. **Berchemia multinervis** (Al. Braun) Heer.
Illustrated specimen.
Denver (Cret.). South Table Mountain, near Golden, Colorado.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 73, pl. 33, fig. 2.
=Rhamnus goldianus.

820. **Berchemia multinervis** (Al. Braun). Heer.
Supplemental type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 277.

8300. **Betula æqualis?** Lesquereux. Illustrated specimen.
Payette formation (Miocene). Two miles southeast of Marsh postoffice, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 728, pl. 102, fig. 5.

7074. **Betula angustifolia** Newberry. Types.
7075. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 508; Mon. XXXV, U. S. Geol. Surv., 1898, p. 63, pl. 46, fig. 5; pl. 47, fig. 5.

5367. **Betula basiserrata** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 32, pl. 14, fig. 4.

643. **Betula beatriciana** Lesquereux. Types.
745. Dakota (Cret.). Near Beatrice, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 95; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 61, pl. 5, fig. 5; pl. 30, fig. 4.

8485. **Betula bendirei** Knowlton. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 40, pl. 4, fig. 2.

159. **Betula caudata** Goeppert. Types.
160. Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 293.

=Betula stevensoni.

See Betula goepperti and Alnus americana.

5366. **Betula coryloides** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 31, pl. 14, fig. 3.

8535. **Betula? dayana** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 41, pl. 4, fig. 4.

1670. **Betula florissanti** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 150, pl. 27, fig. 11.

159. **Betula goepperti** Lesquereux. Types.
160. Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 138, pl. 17, figs. 22, 23.

=Betula stevensoni.

See Betula caudata (?) and Alnus americana.

158. **Betula gracilis?** Ludwig. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 138, pl. 17, fig. 20.

7058b. **Betula heterodonta** Newberry. Types.
7071 to 7073. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 508; Mon. XXXV, U. S. Geol. Surv., 1898, p. 64, pl. 44, figs. 1–3; pl. 45, fig. 6.

7047. **Betula heteromorpha** Knowlton. Types.
7052. 7060. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 39.

See Populus polymorpha.

8481. **Betula heteromorpha** Knowlton. Types.
8482. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 698; Bull. No. 204, U. S. Geol. Surv., 1902, p. 39, pl. 3, figs. 6, 7.

4350. **Betula iddingsi** Knowlton. Types.
4353. Fort Union (Tert.). Hill above Lost Creek, bed No. 2, and
5086. Yellowstone River, one-half mile below the mouth of
5164. Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 698, pl. 86, figs. 4, 5.

8567. **Betula nigra** Linnæus. Types.
8568. Interglacial (Pleistocene). Morgantown, West Virginia.
8588.
8589.

Knowlton in I. C. White, Amer. Geol., XVIII, 1896, p. 371.

5365. **Betula prisca** Ettingshausen. Illustrated specimen.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 31, pl. 14, fig. 2.

161. **Betula stevensoni** Lesquereux. Type.
161a. Laramie ? (Cret.). Evanston, Wyoming.
162.
162a.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 293; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 139, pl. 18, figs. 1–5.

159. **Betula stevensoni** Lesquereux. See Alnus americana, Betula
160. goepperti, and B. caudata.

1671. **Betula truncata** Lesquereux. Types.
1742. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 150, pl. 28, figs. 7, 8.

156. **Betula vogdesii** Lesquereux. Types.
157. Laramie? (Cret.). Fort Fetterman, Wyoming.

Lesquereux Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 312; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 137, pl. 17, figs. 18, 19.

30076. **Betula** sp. Knowlton.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 153, pl. 24, fig. 2.

8299. **Betula** sp. Knowlton (fruit of).
Payette (Miocene). Two miles southeast of Marsh post-office, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 727, pl. 99, fig. 9.

2716. **Betulites populifolius** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 64, pl. 6, figs. 1, 2.

50125. **Betulites westii grewiopsideus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 63, pl. 64, fig. 10.

3296. **Bombax virginiensis** Fontaine. Type.
Potomac (Low. Cret.). near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 310, pl. 151, fig. 4.

17581. **Bornia radiata** (Brongniart) Schimper. Illustrated specimens.
17582. Pennsylvanian. Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 706, pl. 91, fig. 5.

3314. **Brachyphyllum crassicaule** Fontaine. Type.
Potomac (Low. Cret.). Entrance to Trent's Reach 72d milepost, near Brooke, Virginia.

Fontaine Mon. XV, U. S. Geol. Surv., 1889, pp. 221, 222, pl. 100, fig. 4; pl. 109, figs. 1–7; pl. 110, figs. 1–3; pl. 111, figs. 6, 7; pl. 112, figs. 6–8; pl. 168, fig. 9.

7652. **Brachyphyllum macrocarpum** Newberry. Types.
7659. Montana (Cret.). North Fork of Dutton's Creek and west
7660. of Harper's Station, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 29, pl. 4, figs. 5, 6.

3320. **Brachyphyllum parceramosum** Fontaine. Types.
3342. Potomac (Low. Cret.). Near Telegraph Station, (Fred-
3950. ericksburg Area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 223, pl. 110, fig. 4.

3747. **Brachyphyllum texense** Fontaine. Type.
Trinity (Lower Cret.). Glenrose, Texas.

Fontaine, Proc. U. Nat. Mus., XVI, 1893, p. 269, pl. 38, figs. 3–5; pl. 39, figs. 1, 1a.

3900. **Brachyphyllum** sp.? Fontaine (cone).
Potomac (Low. Cret.). Entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 224, 225, pl. 168, fig. 2.

3400. **Brachyphyllum** sp. Fontaine (cone).
Potomac (Low. Cret.). Entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 223, 224, pl. 135, fig. 8.

7018. **Brasenia ? antiqua** Newberry. Type.
Green River (Tert.). Green River, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 514; Mon. XXXV, U. S. Geol. Surv., 1898, p. 93, pl. 68, fig. 7.

15559. **Bothrodendron arborescens** (Lesquereux) David White.
See Lycopodites arborescens.

5693. **Brittsia problematica** David White. Types.
5722. Cherokee, Des Moines (Penn.). Pitcher's and Hobb's coal
5723. mines, Henry County, Missouri.
5724. White, Mon. XXXVII, U. S. Geol. Surv,, 1899, p. 98, pl. 47, figs.
5811. 1, 2, 3, 4, 5; pl. 48, figs. 1–3.

18324. **Bruckmannia tuberculata** Sternberg. Illustrated specimen.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 3, fig. 12. (On page 2 is referred to as Asterophyllites.)

=Annularia stellata.
See Asterophyllites sp.

1797. **Bumelia florissanti** Lesquereux. Types.
1798. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 174, pl. 34, figs. 4, 5.

6983. **Cabomba? gracilis** Newberry. Type.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 514; Mon. XXXV, U. S. Geol. Surv., 1898, p. 91, pl. 22, fig. 1.

46. **Cabomba inermis** (Newberry) Hollick. Types.
47. Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 92, pl. 22, fig. 2; pl. 23, fig. 3.

See Psilotum inerme.

1920. **Cæsalpinia? linearis** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 300, pl. 59, fig. 7.

=Mimosites linearis.

17521. **Calamites ramifer** Stur. Illustrated specimens.
17522. Pottsville (Penn.). Campbell's Ledge, near Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text III, 1884, pp. 703–706, pl. 91, fig. 4, 4a.

17386 **Calamites ramosus** Artis. Illustrated specimens.
to Missourian (Penn.). Kansas.
17389. Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 702, 703, pl. 92, figs. 1–4.—White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 101.

17307. **Calamodendron approximatum** Brongniart.
Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 32, pl. 75, fig. 16.

17296. **Calamodendron cruciatum** Sternberg. Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 708, pl. 92, fig. 5.

18356. **Calamostachys brevifolia** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 718, pl. 89, figs. 5, 5a.

18062. **Calamostachys lanceolata** Lesquereux. Type.
18063. Pottsville (Penn.). Male's coal bank, Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 715, pl. 91, fig. 1.

18054. **Calamostachys ovalis** Lesquereux. Type.
Pottsville (Penn.). Cole City, Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 717, pl. 89, fig. 3.

3664. **Calcisphæra lemoni** Knowlton. Type.
Corniferous (Low. Dev.). Falls of the Ohio, Indiana.

Knowlton, Amer. Journ. Sci., XXXVII, 1889, pp. 202–209, figs. 1–3.

1642. **Callicoma microphylla** Ettingshausen. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 246, pl. 43, fig. 3.

=Myrica drymeja.

11238. **Callipteridium aldrichi** Lesquereux. Type.
12087. Pottsville (Penn.). Jefferson Mines, Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 7, pl. 39, figs. 1, 2; Text, I, 1880, p. 171.

=Neuropteris aldrichi.

11916 to 11920. **Callipteridium inæquale** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 33, figs. 2, 2a, 3, 4, 5; Text, I, 1880, p. 168; III, 1884, p. 745, pl. 98, fig. 1.

5603. **Callipteridium inæquale** Lesquereux. Illustrated specimens.
6093. Cherokee, Des Moines (Penn.). Gilkerson's Ford, Henry
6111. County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 123, pl. 39, fig. 4; pl. 41, fig. 1d; pl. 42, fig. g.

11930 to 11932. **Callipteridium mansfieldi** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 27, figs. 1, 2; Text, I, 1880, p. 166.

13181. **Callipteridium membranaceum** Lesquereux. Types.
13182. Cherokee, Des Moines (Penn.). Clinton, Henry County,
13183. Missouri.
13187.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 27, figs. 4, 4a, 5, 5a, 6, 6a, Text, I, 1880, p. 172.—White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 120, pl. 38, figs. 4, 5 (refers specimens numbered 13181 and 13183 to Pecopteris clintoni).

=Pecopteris clintoni (part).

5625. **Callipteridium membranaceum** Lesquereux.
5691. Illustrated specimens.
5810. Cherokee, Des Moines (Penn.). Deepwater, Pitcher's Coal
30858. Mine, and Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 120, pl. 38, figs. 1, 2, 3.

11878. **Callipteridium neuropteroides** Lesquereux. Types.
11879. Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 27, figs. 3, 3a; Text, I, 1880, p. 166.

13601. **Callipteridium rigidum** Lesquereux. Types.
13602. Anthracite series (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 746, pl. 99, figs. 1, 2, 2a.

11942. **Callipteridium rugosum** Lesquereux. Type.
Pottsville (Penn.). Near Pottsville, Pennsylvania.

Lesquereux, Cat. Pottsville Association, 1858, p. 11, pl. 1, fig. 2; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 169.

=Alethopteris rugosa.

13605. **Callipteridium sinuatum** ? (Brongniart) Lesquereux.
13606. Illustrated specimens.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 745, pl. 99, fig. 3.

3589. **Callipteridium sullivantii** (Lesquereux) Weiss.
5479. Illustrated specimens.
5481. Cherokee, Des Moines (Penn.). Pitcher's and Owen's coal
5482. mines, Henry County, Missouri.
5660. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 123, pl. 39, figs.
5674. 1–3; pl. 41, figs. 1–3.

3971. **Callitris?** sp.? Fontaine (cone).
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 272, pl. 169, fig. 8.

490. **Calycites hexaphylla** Lesquereux. Type.
Laramie (Cret.). Evanston, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 402.

=Diospyros wodani.

574. **Calycites polysepala** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 31; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 25, fig. 3; Mon. XXXV, U. S. Geol. Surv., 1898, p. 139, pl. 40, fig. 3.

50019. **Calycites** sp. Lesquereux.
Dakota (Cret.). Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 221, pl. 22, fig. 8.

30789. **Cancellophycus rhombicum** Ulrich. Type.
Yakutat Series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 139, pl. 20, fig. 1.

25801 to 25803. **Cardiocarpon annulare** (Sternberg) Lesquereux. Illustrated specimens.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 814, pl. 110, figs. 28, 29, 30.

25441 to 25446. **Cardiocarpon annulatum** Newberry. Illustrated specimens.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, figs. 36, 37; Text, II, 1880, p. 564.

25807. **Cardiocarpon apiculatum** Goeppert and Berger. Supplemental type.
Pottsville (Penn.). Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 571.

6097. **Cardiocarpon (Samaropsis) branneri** Fairchild and David White. Illustrated specimen.
Cherokee, Des Moines (Penn.). Gilkerson's Ford, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 266, pl. 72, fig. 3; pl. 61, fig. 1e.

25379. **Cardiocarpon cinctum** Lesquereux. Type.
Anthracite series, Coal E (Penn.). Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 804, pl. 109.

25592. **Cardiocarpon circulare** Lesquereux. Type.
Allegheny (Penn.). Vermilion County, Indiana.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 812, pl. 110, fig. 10.

25565. **Cardiocarpon conglobatum** Lesquereux. Type.
Coal-bearing shales, Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 810, pl. 109, fig. 11.

25598 to 25602. **Cardiocarpon crassum** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 812, pl. 109, fig. 12; pl. 110, figs. 6–9.

25384. **Cardiocarpon dilitatum** Lesquereux. Type.
Coal-bearing shale, Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 806, pl. 110, fig. 2.

26417. **Cardiocarpon diminutivum** Lesquereux. Type.
Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, fig. 48; Text, III, 1884, p. 570.

25672. **Cardiocarpon diplotestum** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 812, pl. 110, fig. 13.

25511. 25611. **Cardiocarpon divergens** Lesquereux. Types.
Anthracite Series, Coal F (Penn.). Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 811, pl. 110, fig. 4.

25786 to 25789. **Cardiocarpon ellipticum** (Sternberg) Lesquereux. Illustrated specimens.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Serv. Pa., Rept. Prog. P, Text, III, 1884, p. 814, pl. 110, figs. 25, 26, 27.

25888. 25890. **Cardiocarpon ellipticum** (Sternberg) Lesquereux. Illustrated specimens.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 814, pl. 110, figs. 23, 24.

25714. **Cardiocarpon elongatum** Newberry. Illustrated specimen.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 809, pl. 109, fig. 16.

25775. **Cardiocarpon fasciculatum** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, figs. 30, 30a; Text, II, 1880, p. 570.

26158. 26159. **Cardiocarpon harveyi** Lesquereux. Types.
Coal-bearing shale, Pottsville (Penn.). Privett's Bank, Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p, 808, pl. 109, figs. 22, 23.

25417. **Cardiocarpon ingens** Lesquereux. Type.
Coal-bearing shale, Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Second Geol. Rept. Ark., 1860, p. 311, pl. 4, fig. 4; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, fig. 35; Text, II, 1880, p. 563.

26421. **Cardiocarpon kansasiense** (Lesquereux) David White. Type.
Pennsylvanian. Osage, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 108.

25684. **Cardiocarpon late-alatum** Lesquereux. Types.
25685. Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, figs. 46, 47; Text, II, 1880, p. 568.

25585. **Cardiocarpon latior** Lesquereux. Types.
25586. Pottsville (Penn.). Rockwood, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 811, pl. 110, figs. 5, 11, 12.

26165. **Cardiocarpon longicolle** Lesquereux. Types.
26166. Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 808, pl. 109, figs. 24, 25.

25516. **Cardiocarpon ovale** Lesquereux. Types.
25517. Coal-bearing shale, Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 810, pl. 109, fig. 9.

25482 to 25486. **Cardiocarpon pachytestum** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 565; III, 1884, p. 809, pl. 109, figs. 13, 14, 15.

25504. **Cardiocarpon patens** Lesquereux. Type.
Coal-bearing shale, Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 807, pl. 110, fig. 3.

25862. **Cardiocarpon pusillum** Lesquereux. Types.
25923. Anthracite Series, Coal E and F (Penn.). Wilkesbarre,
25924. Pennsylvania.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 815, pl. 110, figs. 31, 32, 33.

15630. **Cardiocarpon simplex** Lesquereux. Types.
15631. Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, figs. 49, 50; Text, II, 1880, p. 569.

26205. **Cardiocarpon speciosum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 807, pl. 110, fig. 1.

25678 to 25680. **Cardiocarpon zonulatum** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, fig. 44, 45; Text, II, 1880, p. 568.

Cardiocarpus. See Cardiocarpon.

98. **Carex berthoudi** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, 1878, p. 92, pl. 9, fig. 4.

1672 to 1674. **Carpinus fraterna** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 152, pl. 27, figs. 12–14.

176. 532. **Carpinus grandis** Unger. Illustrated specimens.
Green River (Tert.). Near Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 143, pl. 19, fig. 9; pl. 64, fig. 9.

168 to 170. **Carpinus grandis** Unger. Illustrated specimens.
Green River (Tert.). Elko Station, Nevada; Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 143, pl. 64, figs. 8–10.

See Quercus elkoana.

508. **Carpites bursæformis** Lesquereux. Type.
Laramie? (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 306, pl. 60, fig. 30.

511. **Carpites cocculoides?** Heer. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 307, pl. 60, fig. 33.

512. **Carpites cocculoides? major** Lesquereux. Type.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 307, pl. 60, fig. 39.

495. 502. **Carpites coffeæformis** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 303, pl. 60, figs. 6, 7.

50016. **Carpites cordiformis** Lesquereux. Type.
Dakota (Cret.). Ottawa County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 220, pl. 22, fig. 9.

497. **Carpites costatus** Lesquereux. Type.
Denver (Cret.). South Table Mountain, near Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 303, pl. 60, fig. 5.

2442. **Carpites fragariæformis** Lesquereux. Type.
Miocene (Tert.). Cherry Creek, Wasco County, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 16.

500. **Carpites glumæformis** Lesquereux. Type.
501. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 304, pl. 60, figs. 14, 15.

516. **Carpites laurineus** Lesquereux. Type.
Laramie? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 304, pl. 60, fig. 20.

515. **Carpites ligatus** Lesquereux. Type.
Laramie (Cret.). Placer Mountain, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 307, pl. 60, fig. 36.

493. **Carpites lineatus** (Newberry) Lesquereux.
Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 302, pl. 60, figs. 1–1d.

504. **Carpites mitratus** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 304, pl. 60, fig. 18.

498. **Carpites myricarum** Lesquereux. Types.
499. Laramie (Cret.). Black Buttes, Wyoming.
499a.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 303, pl. 60, figs. 8–11.

=Ginkgo sp.

266. **Carpites oviformis** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 302, pl. 30, fig. 6a.

509. **Carpites pealei** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 306, pl. 60, fig. 31.

4480. **Carpites pedunculatus** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 755, pl. 103, fig. 3.

503. **Carpites rostellatus** Lesquereux. Types.
503a. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 303, pl. 60, figs. 12, 13.

514. **Carpites spiralis** Lesquereux. Type.
Laramie (Cret.). Placer Mountain, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 306, pl. 60, fig. 27.

See Carpolithes spiralis.

496. **Carpites triangulosus** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 302, pl. 60, fig. 4.

505. **Carpites utahensis** Lesquereux. Type.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 305, pl. 60, fig. 22.

947. **Carpites verrucosus** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 305, pl. 60, fig. 23.

494a. **Carpites viburni** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 305, pl. 60, fig. 26.

756. **Carpites?** sp. Lesquereux.
757. Dakota (Cret.). Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 221.

See Carpolithes? sp.

491. **Carpolithes arachioides** Lesquereux. Types.
492. Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 403.

=Leguminosites? arachioides.

26355. **Carpolithes butlerianus** Lesquereux. Type.
Anthracite series, Coal E (Carb.). Butler Mine, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 824, pl. 111, fig. 19.

26371. **Carpolithes cerasiformis** Sternberg. Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 824, pl. 111, fig. 18.

525. **Carpolithes compositus** Lesquereux. Type.
Laramie? (Cret.). Placer Mountain, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr. for 1871, Suppl. 1872, p. 16.

=Palmocarpon compositum.

26483. **Carpolithes conicus** Lesquereux. Type.
Pennsylvanian. Shamokin, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 824, pl. 111, fig. 17.

25757 to 25759. **Carpolithes granularis** Sternberg. Illustrated specimens.
Upper Coal Measures (Penn.). Osage, Kansas.
Anthracite series, Coal A (Penn.). Boston Mine, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 825, pl. 111, figs. 20, 21.

3755. **Carpolithes harveyi** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 278, pl. 43, fig. 3.

15964 to 15966. **Carpolithes latior** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 826, pl. 110, figs. 69, 70.

25851 to 25853. **Carpolithes minimus** Sternberg. Illustrated specimens.
Allegheny (Penn.). Cannelton, Pennsylvania (25851).
Anthracite series, Coal E and F (Penn.). Stanton Mine, Wilkesbarre, Pennsylvania (25852 and 25853).

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 825, pl. 110.

25950 to 25952. **Carpolithes perpusillus** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 825, pl. 111, figs. 22, 23, 24.

6960. **Carpolithes spinosus** Newberry. Type.
6961. Laramie (Cret.). North Branch Purgatory River, Las Animas County, Colorado.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 514; Mon. XXXV, U. S. Geol. Surv., 1898, p. 138, pl. 68, figs. 2, 3.

514. **Carpolithes spiralis** Lesquereux. Type.
Laramie (Cret.). Placer Mountain, New Mexico.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., Suppl., 1871 [1872], p. 16.

=Carpites spiralis.

25810. **Carpolithes transsectus** Lesquereux. Types.
25811. Coal-bearing shale, Pottsville (Penn). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 826, pl. 111, figs. 27, 27a, 27b.

756. **Carpolithes ?** sp. Lesquereux.
757. Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 114, pl. 27, fig. 5; pl. 30, fig. 11.

=Carpites sp.

3888. **Carpolithus agglomeratus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 267, pl. 134, fig. 5.

7380. **Carpolithus barrensis** Ward. Type.
Lakota (Low. Cret.). John Barr's tunnel, one mile north of Forks of Hay Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 692, pl. 169, figs. 14, 15.

3359. **Carpolithus brookensis** Fontaine. Type.
Potomac (Low. Cret.). Bank near Brooke; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 268, pl. 135, figs. 2, 4; pl. 136, fig. 6; pl. 167, fig. 6.

3408. **Carpolithus conjugatus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 267, pl. 134, fig. 9.

3961. **Carpolithus curvatus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 269, pl. 135, fig. 17.

3407. **Carpolithus fasciculatus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 265, pl. 134, fig. 1.

7362. **Carpolithus fasciculatus** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff north side of valley of South Fork of Hay Creek, two and one-half miles west of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 691, pl. 169, figs. 11, 12.

7342. **Carpolithus fœnarius** Ward. Type.
Lakota (Low. Cret.). Lon Cottle's ranch, one mile southwest of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 693, pl. 169, figs. 17, 18.

7364. **Carpolithus montium-nigrorum** Ward. Type.
Lakota (Low. Cret.). Cliff on north side of valley of South Fork of Hay Creek, two and one-half miles west of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 692, pl. 169, fig. 13.

3754. **Carpolithus obovatus** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 278, pl. 43, fig. 5.

3411. **Carpolithus ternatus** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 265, pl. 134, figs. 2–4, 6, 8.

3388. **Carpolithus virginiensis** Fontaine. Types.
3870. Potomac (Low. Cret.). Near telegraph station; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 266, pl. 134, figs. 11–14; pl. 135, figs. 1, 5; pl. 168, fig. 7.

7390. **Carpolithus virginiensis** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff north side Pine Creek, two miles west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 693, pl. 169, fig. 16.

567. **Carya antiquorum** Newberry. Types.
568. Fort Union (Tert.). Mouth of Yellowstone River, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 72; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, pl. 23, fig. 2; Mon. XXXV, U. S. Geol. Surv., 1898, p. 35, pl. 31, figs. 1, 2.

=Hicoria antiquorum.

470 to 475. **Carya antiquorum** Newberry. Illustrated specimens.
Laramie (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 289, pl. 57, figs. 1–5; pl. 58, fig. 2.

5358. **Carya antiquorum** Newberry. Illustrated specimen.
Denver? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 34, pl. 15, fig. 2.

1870. **Carya bilinica** Unger. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 191, pl. 39. fig. 1.

=Hicoria juglandiformis.

487. **Cassia concinna?** Heer. Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 299, pl. 59, figs. 8, 8a.

8308. **Cassia obtusa** Knowlton. Type.
8309. Payette Formation (Miocene). Two miles southeast of Marsh postoffice, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 731, pl. 100, figs. 4, 5.

485. **Cassia podogonioides** Ettingshausen. Types.
581. Laramie (Cret.). Black Buttes, Wyoming.
Montana (Cret.). Point of Rocks, Wyoming.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 143; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 69.

=Podogonium americanum.

7092. **Cassia** sp.? Newberry.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 113, pl. 46, fig. 10.

7645. **Castalia? duttoniana** Knowlton. Types.
7646. Montana (Cret.). North Fork of Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 55, pl. 13, fig. 7.

194. **Castanea intermedia** Lesquereux. Type.
Green River (Tert.). Middle Park (Florissant?), Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 313; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 164, pl. 21, fig. 7.

5080 to 5085. **Castanea pulchella** Knowlton. Types.
Fort Union (Tert.). Fossil Forest Ridge, Bed No. 7, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 702, pl. 86, figs. 6–8.

8585. **Castanea pumila** Miller. Type.
Interglacial (Pleistocene). Morgantown, West Virginia.

Knowlton in I. C. White, Amer. Geol., XVIII, 1896, p. 371.

5383. **Casuarina covillei** Ward. Type.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 353, pl. 3, fig. 2.

566. **Catalpa crassifolia** Newberry. Type.
Fort Union (Tert.). Amil Creek?, Upper Missouri River, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 56.

6993. **Catalpa crassifolia** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 56; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 22.

=Aristolochia cordifolia.

7. **Caulerpites incrassatus** Lesquereux. Illustrated specimens.
8. Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 40, pl. 1, figs. 11, 12.

25134. **Caulerpites** sp. Lesquereux.
Pennsylvanian. Osage, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 88.

2321. **Caulinites beckeri** Lesquereux. Type.
Pleistocene (Tert.). Clear Lake, California.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 36, pl. 1, fig. 3; pl. 2, figs. 2–4.

120. **Caulinites fecundus** Lesquereux. Types.
121. Laramie (Cret.). Marshall mine, near Erie, Colorado.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 384; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 101, pl. 14, figs. 1–3.

=Onoclea fecunda.

123 to 125. **Caulinites sparganioides** Lesquereux. Types.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 391; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 99, pl. 14, figs. 4, 7, 8.

127. **Caulinites sparganioides** Lesquereux. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 99, pl. 14, fig. 5.

17125. **Caulopteris giffordi** Lesquereux. Type.
Lower Coal Measures (Penn.). Alta, Peoria County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 60, figs. 1, 2; Text, I, 1880, p. 343.

17106. **Caulopteris lacoei** Lesquereux. Type.
Anthracite Series, Coal G (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 344.

17118. **Caulopteris mansfieldi** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 60, fig. 3; Text, I, 1880, p. 346.

431. **Ceanothus cinnamomoides** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 289.

=Zizyphus cinnamomoides.

425 to 430. **Ceanothus fibrillosus** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 381.

=Zizyphus fibrillosus.

4160 to 4164. **Cebatha haydeniana** (Ward) Knowlton. Types.
Fort Union (Tert.). Burns's Ranch and Iron Bluff, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 62.

See Cocculus haydenianus.

408. 774. **Celastrinites ambiguus** (Lesquereux) Knowlton. Types.
Livingston (Cret.). Six miles above Spring Canyon, Gallatin County, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 62.

See Myrica ambigua and Celastrinites lævigatus.

407. **Celastrinites artocarpidioides** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 268, pl. 35, fig. 3.

See Artocarpidium olmidæfolium?

408. 774. **Celastrinites lævigatus** Lesquereux. Types.
Livingston (Cret.). Six miles above Spring Canyon, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 269, pl. 17, figs. 16, 16a.

=Celastrinites ambiguus.
See Myrica ambigua.

3958. **Celastrophyllum arcinerve** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 304, pl. 146, fig. 3.

3240. **Celastrophyllum brookense** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 305, 306, pl. 158, fig. 8; pl. 159, fig. 7.

5394. **Celastrophyllum hunteri** Ward. Type.
Potomac (Low. Cret.). White House Bluff, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 358, pl. 4, fig. 9.

3304. **Celastrophyllum latifolium** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 306, pl. 172, figs. 3, 6; pl. 173, fig. 13.

2811. **Celastrophyllum obliquum** Knowlton. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Knowlton in Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 173, pl. 57, fig. 5.

3322. **Celastrophyllum obovatum** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 307, pl. 172, figs. 9, 10.

3459. **Celastrophyllum obtusidens** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 305, pl. 156, fig. 5.

5997. **Celastrophyllum pulchrum** Ward. Types.
Dakota (Low. Cret.). Evans's quarry on Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 706, pl. 171, figs. 3, 4.

3249. **Celastrophyllum tenuinerve** Fontaine. Type.
Potomac (Low. Cret.). Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 306, pl. 172, fig. 2.

5340. **Celastrus alnifolius** Ward. Type.
5344. Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 80, pl. 35, figs. 1, 2.

8539. **Celastrus confluens** Knowlton. Types.
8540. Mascall beds, Miocene (Tert.). Twelve miles west of Mount
8541. Vernon, and Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 71, pl. 12, figs. 1–3.

4345. **Celastrus culveri** Knowlton. Types.
5140. Fort Union (Tert.) Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 732, pl. 97, fig. 4.

5341. **Celastrus curvinervis** Ward. Types.
5342. Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 82, pl. 36, figs. 3, 4.

8516. **Celastrus dignatus** Knowlton. Types.
to Mascall beds, Miocene (Tert.). Twelve miles west of
8518. Mount Vernon, Grant County, Oregon.

Knowlton, Bull, No. 204, U. S. Geol. Surv., 1902, p. 71, pl. 11, fig. 5.

4390. **Celastrus ellipticus** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, base of bluff, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 734, pl. 97, fig. 3.

5337. **Celastrus ferrugineus** Ward. Types.
5338. Fort Union (Tert.). Burns's Ranch, and Iron Bluff, near
5339. Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 78, pl. 34, fig. 1, 3, 4.

1854. **Celastrus fraxinifolius** Lesquereux. Types.
to Green River (Tert.). Florissant, Colorado.
1856.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 184, pl. 33, figs. 2–4.

5336. **Celastrus grewiopsis** Ward. Type.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 81, pl. 36, fig. 2.

4397. **Celastrus inæqualis** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, base of bluff, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 733, pl. 98, fig. 3.

7632. **Celastrus lindgreni** Knowlton. Types.
7633. Payette (Miocene). Idaho City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 732, pl. 99, fig. 13; pl. 100, fig. 6.

5335. **Celastrus ovatus** Ward. Type.
Fort Union (Tert.). Iron Bluff, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 81, pl. 36, fig. 1.

5331 **Celastrus pterospermoides** Ward. Types.
to Fort Union (Tert.). Iron Bluff and Burns's Ranch, near
5334 Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 80, pl. 35, figs. 3–6.

5345. **Celastrus taurinensis** Ward. Types.
5346. Fort Union (Tert.). Burns's Ranch and Bull Mountains, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 79, pl. 34, figs. 5, 6.

1578. **Celtis mccoshii** Lesquereux. Type.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 163, pl. 38, fig. 7.

633. **Celtis ? ovata** Lesquereux. Types.
633b. Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I 1874, p. 66, pl. 4, figs. 2, 3.

=Ampelophyllum ovatum.
See Populites ovata.

7005. **Celtis parvifolia** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 510; Mon. XXXV, U. S. Geol. Surv., 1898, p. 84, pl. 53, fig. 6.

3447. **Cephalotaxopsis brevifolia** Fontaine. Types.
3881 to 3883. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 238, pl. 105, fig. 3; pl. 106, fig. 5; pl. 107, fig 5.

8234. **Cephalotaxopsis carolinensis** Fontaine. Type.
Triassic. Lockville ?, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 304, pl. 43, fig. 5.

3289. **Cephalotaxopsis magnifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 236, 237, pl. 104, figs. 4, 5; pl. 105, figs. 1, 2, 4; pl. 106, figs. 1, 3; pl. 107, figs. 1, 2, 4; pl. 108, figs. 1, 3, 4.

5957a. **Cephalotaxopsis magnifolia** Fontaine.
5957b. Illustrated specimens.
5990. Lakota (Low. Cret.). South Fork of Hay Creek near Barrett, and Barrett, Crook County, Wyoming.

Fontaine. Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 686, pl. 162, fig. 1, b; pl. 169, figs. 3, 4.

3415. **Cephalotaxopsis microphylla** Fontaine. Types.
3884. Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 238, pl. 108, fig. 5; pl. 109, fig. 9.

3446. **Cephalotaxopsis ramosa** Fontaine. Types.
3880. 3968. Potomac (Low. Cret.). Fredericksburg; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 237, 238, pl. 104, figs. 2, 3; pl. 106, figs. 2, 4; pl. 107, fig. 3; pl. 108, fig. 2.

4010. **Cephalotaxopsis**? **rhytidodes** Ward. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 258, pl. 68, fig. 8.

See Cephalotaxopsis sp. ?

4010. **Cephalotaxopsis** sp. ? Fontaine.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cephalotaxopsis ? rhytidodes.

143 to 146. **Ceratopetalum americanum** Ettingshausen. Types.
Tertiary. Florissant, Colorado.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissenscht, LXVII, 1883, p. 37; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 58.

See Myrica acuminata.

7685. **Cercis ? nevadensis** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt., II, 1900 p. 217, pl. 30, fig. 23.

1918. **Cercis parvifolia** Lesquereux. Types.
1919. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 201, pl. 31, fig. 7.

3663. **Chara compressa** Knowlton. Type.
Eocene (Tert.). Wales, San Pete County, Utah.

Knowlton, Botanical Gazette, XIII, No. 6, 1888, pp. 156, 157, figs. 1, 2.

1611. **Chara? glomerata** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 135, pl. 21, fig. 12.

8222. **Chara springeræ** Knowlton. Type.
Pleistocene. Arroyo Pecos, Las Vegas, New Mexico.

Knowlton, Torreya, II, 1902, p. 72 [fig. in text].

8323. **Chara stantoni** Knowlton. Type.
Colorado? (Cret.). West side of Smith's Fork of Bear River, twenty miles north of Cokeville, Wyoming.

Knowlton, Botanical Gazette, XVIII, 1893, p. 141, figs. 1–3.

8241. **Cheirolepis muensteri** (Schenk) Fontaine. Illustrated specimen.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 108, pl. 53, fig. 3.

=Palissya brevifolia.

See Walchia brevifolia.

30781. **Chondrites alpestris** Heer. Illustrated specimen.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 136, pl. 18, fig. 4.

30779. **Chondrites divaricatus** Fischer-Ooster. Illustrated specimens.
30780. Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 136, pl. 16, figs. 1, 2.

2448. **Chondrites filiciformis** Lesquereux. Type.
Neocomian (Cret.). Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32, pl. 16, fig. 1.

6. **Chondrites subsimplex** Lesquereux. Illustrated specimen.
Laramie (Cret.) Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr. VII, Pt. II, 1878, p. 41, pl. 1, fig. 13.

7673. **Chrysobalanus pollardiana** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 216, pl. 30, fig. 19.

7699. **Cinchonidium ? turneri** Knowlton. Types.
7700. Esmeralda (Neocene). 3.8 and 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv. Pt. II, 1900, p. 218, pl. 30, figs. 9–11.

313. **Cinnamomum affine** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 219, pl. 37, fig. 7.

5353. **Cinnamomum affine** Lesquereux. Illustrated specimens.
5354. Laramie (Cret.). Black Buttes Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 50, pl. 24, figs. 3, 5.

=Ficus trinervis.

8490. **Cinnamomum bendirei** Knowlton. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, pp. 59, 60, pl. 10, fig. 4.

7581. **Cinnamomum dilleri** Knowlton. Type.
Miocene (Tert.) Comstock, Douglas County, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 47, pl. 4, fig. 1.

2712. **Cinnamomum ellipsoideum** Saporta and Marion. Illustrated specimens.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 105, pl. 51, figs. 8, 9.

316. **Cinnamomum ellipticum** Knowlton. Type.
Livingston (Cret.). Spring Canyon (Hodgson's Coal Mine), twelve miles southeast of Bozeman, Montana.

Knowlton, Bull, No. 105, U. S. Geol. Surv., 1894, p. 54.

See Cinnamomum polymorphum and C. rossmässleri.

1061. **Cinnamomum heerii** Lesquereux. Type.
Cretaceous. Point Doughty, Orcas Island, Washington.

Lesquereux, Amer. Journ. Sci. (2), XXVII, 1859, p. 361.

6939. **Cinnamomum heerii** Lesquereux. Illustrated specimen.
Puget Sound (Cret.). Point Doughty, Orcas Island, Washington.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 100, pl. 17, fig. 3.

315. **Cinnamomum lanceolatum?** (Unger) Heer.
790. Illustrated specimens.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 219, pl. 36, fig. 12.

5350. **Cinnamomum lanceolatum?** (Unger) Heer.
Illustrated specimen.
Laramie? (Cret.). Hodges Pass, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 49, pl. 24, fig. 2.

=Cinnamomum wardii.

2695. **Cinnamomum marioni** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 106, pl. 51, figs. 6, 7.

316. **Cinnamomum polymorphum** Al. Braun.
Illustrated specimens.
Livingston (Cret.). Spring Canyon (Hodgson's Coal Mine), twelve miles southeast of Bozeman, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 221, pl. 37, fig. 10.

=Cinnamomum ellipticum.
See Cinnamomum rossmässleri.

316. **Cinnamomum rossmässleri** Heer.
Livingston (Cret.). Spring Canyon (Hodgson's Coal Mine), twelve miles southeast of Bozeman, Montana.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 379.

=Cinnamomum ellipticum.
See Cinnamomum polymorphum.

834. **Cinnamomum scheuchzeri** Heer. Illustrated specimens.
Laramie (Cret.). Bozeman Coal Field, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 220, pl. 38, fig. 8; Mon. XVII, 1892, p. 104, pl. 11, fig. 4.

642. **Cinnamomum scheuchzeri** Heer. Illustrated specimen.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 83, pl. 30, figs. 2, 3.

See Daphnogene cretacea.

4494. **Cinnamomum spectabile** Heer. Illustrated specimen.
Miocene (Tert). Tower Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 727, pl. 94, fig. 6.

5350. **Cinnamomum wardii** Knowlton. Type.
Laramie (Cret.) Hodges Pass, Wyoming.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 69.
See Cinnomomum lanceolatum.

2750. **Cissites acerifolius** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 163, pl. 58, fig. 1.

695. **Cissites acuminatus** Lesquereux. Illustrated specimens.
696. Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 67, pl. 5, figs. 3, 4.

50008. **Cissites alatus** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 160, pl. 23, fig. 6.

50114. **Cissites brownii** Lesquereux. Illustrated specimen.
Dakota (Cret.). Cloud County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 162, pl. 18, fig. 11.

50145. **Cissites dentato-lobatus** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 164, pl. 66, fig. 4.

687 to 689. **Cissites harkerianus** Lesquereux. Illustrated specimens.
Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 67, pl. 3, figs. 3, 4; pl. 11, fig. 3.
See Sassafras harkerianum.

50057. **Cissites ingens** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 159, pl. 19, fig. 2.

5994. **Cissites ingens** Lesquereux. Illustrated specimen.
Dakota (Cret.). Falls of Minnekahta Creek, four miles below Hot Springs, South Dakota.
Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 708, pl. 172, fig. 1.

6003. **Cissites ingens** Lesquereux. Illustrated specimen.
Dakota (Cret.). Evans's quarry on Minnekahta Creek, four miles below Hot Springs, South Dakota.
Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 708, pl. 172, fig. 2.

2737. **Cissites ingens parvifolia** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 160, pl. 57, figs. 3, 4.

2400. **Cissites microphyllus** Lesquereux. Type.
Pleistocene? (Tert.). Clear Lake, California.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 44, pl. 3, fig. 11.

50006. **Cissites populoides** Lesquereux. Type.
50007. Dakota (Cret.). In Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 162, pl. 18, figs. 12, 13.

690 to 692. **Cissites salisburiæfolius** Lesquereux. Type.
Dakota (Cret.). Lancaster County, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 66.

(Illustrated as Sassafras obtusum in Vol. VI, pl. 13, figs. 2–4.)

See Sassafras obtusus and Populites salisburiæfolius.

5996. **Cissites salisburiæfolius** Lesquereux. Illustrated specimen.
Dakota (Cret.). Falls of Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt, II, 1899, p. 707, pl. 171, fig. 5.

343 to 345. 352. **Cissus arrotiæfolia** Lesquereux. Types.
Green River (Tert.). Green River and Medicine Bow, Wyoming.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 388; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 314; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 239, pl. 40, figs. 15–17; pl. 42, fig. 1.

4357. **Cissus haguei** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, middle stratum, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 741, pl. 101, fig. 2.

346. 347. **Cissus lævigata** Lesquereux. Illustrated specimens.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 238, pl. 40, figs. 12, 13.

349. **Cissus lobato-crenata** Lesquereux. Illustrated specimen.
Denver (Cret.). Mount Bross, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 240, pl. 41, fig. 1.

350. 806. **Cissus tricuspidata** Heer. Illustrated specimens.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 240, pl. 41, figs. 6, 7.

3309. 3772. 3816. **Cladophlebis acuta** Fontaine. Types.
Potomac (Low. Cret.). Hillside near Potomac Run; fishing hut above Dutch Gap Canal, Virginia.

3912. 3930. Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 74, pl. 5, fig. 7; pl. 7, fig. 6; pl. 10, figs. 6, 7; pl. 11, figs. 7, 8; pl. 166, fig. 5.

3433. **Cladophlebis alata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 77, 78, pl. 19, fig. 5.

8355. **Cladophlebis alata** Fontaine. Illustrated specimens.
8366. Jurassic. Cape Lisburne, Alaska.
8368.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 158, pl. 39, fig. 3; pl. 40, figs. 1, 7.

4002. **Cladophlebis alata** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 229, pl. 45, fig. 20.

See Pecopteris strictinervis?

31579. **Cladophlebis alata** Fontaine? Illustrated specimen.
(3996) Shasta (Low. Cret.) Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 229, pl. 45, fig. 21.

See Cladophlebis inclinata.

8354. **Cladophlebis alata** Fontaine. Illustrated specimens.
8356. Jurassic. Cape Lisburne, Alaska.
8359.
8369. Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 158, pl. 39, figs. 1–3, 5, 6, 9–11; pl. 40, fig. 3.
(2434) See Aspidium oerstedi.

3197. **Cladophlebis alata** Fontaine. Illustrated specimens.
3302. Potomac (Low. Cret.). Fredericksburg, Virginia, and
3810. Covington street, Baltimore, Maryland.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 158.

See Pecopteris strictinervis.

30972. **Cladophlebis auriculata** Fontaine. Type.
Triassic. Carbon Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, pl. 26, fig. 6.

3301. **Cladophlebis browniana** (Dunker) Seward. See Pecopteris browniana. (Also catalogue numbers 3885 to 3887, 3922.)

31556. **Cladophlebis browniana** (Dunker) Seward.
(3996) Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 226, pl. 65, fig. 9.

See Cladophlebis inclinata.

3288. **Cladophlebis constricta** Fontaine. Type.
3817. Potomac (Low. Cret.). Fredericksburg; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 68, pl. 2, fig. 11; pl. 3, fig. 2; pl. 6, figs. 5, 6, 8–14; pl. 21, figs. 9, 13; pl. 169, fig. 2.

3277. **Cladophlebis crenata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; 72d milepost, near Brooke; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 75, 76, pl. 9, figs. 7–9; pl. 10, figs. 1, 2; pl. 13, figs. 1–3; pl. 19, fig. 1; pl. 20, fig. 6.

3818. **Cladophlebis denticulata** Fontaine. Type.
3286. Potomac (Low. Cret.). Fredericksburg, and roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 70, 71, pl. 4, fig. 2; pl. 6, fig. 7.

3339. **Cladophlebis distans** Fontaine. Type.
3813. Potomac (Low. Cret.). Banks of Dutch Gap Canal; fishing hut above canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 77, pl. 13, figs. 4, 5.

3391. **Cladophlebis dunkeri** (Schimper) Seward. See Aspidium
3324. dunkeri.
3828.

3200. **Cladophlebis falcata** Fontaine. Types.
3239. Potomac (Low. Cret.). Fredericksburg, Virginia.
3814.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 72, 73, pl. 4, fig. 8; pl. 5, figs. 1–6; pl. 6, fig. 7; pl. 7, figs. 1, 2.

4006. **Cladophlebis falcata** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 227, pl. 65, fig. 14.

See Thinnfeldia variabilis?

7427. **Cladophlebis heterophylla** Fontaine. Type.
Kootanie (Low. Cret.). Great Falls, Montana.

Fontaine, Proc. U. S. Nat. Mus., XV, 1892, p. 493, pl. 84, fig. 2.

8370 **Cladophlebis huttoni** (Dunker) Fontaine. Types.
to Jurassic? Cape Lisburne, Alaska.
8374.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 161, pl. 41.

8364. **Cladophlebis huttoni** (Dunker) Fontaine. Type.
(2436.) Jurassic? Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 161, pl. 43, fig. 7.

See Asplenium forsteri.

8376 **Cladophlebis huttoni** (Dunker) Fontaine. Types.
to Jurassic? Cape Lisburne, Alaska.
8379.
(2434.)

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 161, pl. 42; pl. 43, figs. 1–6.

See Aspidium oerstedi.

3960. **Cladophlebis inæquiloba** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 80, pl. 25, fig. 8.

3386. **Cladophlebis inclinata** Fontaine. Types.
3959. Potomac (Low. Cret.). Near telegraph station, Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 76, 77, pl. 10, figs. 3, 4; pl. 20, fig. 8.

3995. **Cladophlebis inclinata?** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cladophlebis parva.

3996. **Cladophlebis inclinata** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol Surv., 1895, p. 15.

=Cladophlebis alata? (part).
=Cladophlebis browniana (part).

3423. **Cladophlebis latifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 69, 70, pl. 3, fig. 1; pl. 6, fig. 4.

3492. **Cladophlebis microphylla** Fontaine. Types.
30970. Triassic. Clover Hill, Richmond Coal Field, Virginia.
30971. Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 51, pl. 27, fig. 2.

3430. **Cladophlebis oblongifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 74, 75, pl. 7, figs. 3, 5.

3493. **Cladophlebis ovata** Fontaine. Types.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 50, pl. 26, fig. 5; pl. 27, fig. 3.

3287. **Cladophlebis pachyphylla** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 80, pl. 25, fig. 9.

3340. **Cladophlebis parva** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 73, pl. 4, fig. 7; pl. 6, figs. 1–3.

3995. **Cladophlebis parva** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 225, pl. 65, fig. 8.

See Cladophlebis inclinata.

3992. **Cladophlebis parva** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 225, pl. 65, fig. 7.

See Aspidium heterophyllum.

5960. **Cladophlebis parva** Fontaine? Illustrated specimen.
Lakota (Low. Cret.). South Fork of Hay Creek, near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 657, pl. 160, fig. 18.

3312. **Cladophlebis rotundata** Fontaine. Type.
3815. Potomac (Low. Cret.). Fredericksburg, Deep Bottom, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 78, 79, pl. 20, figs. 9, 10.

3406. **Cladophlebis sphenopteroides** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 79, pl. 21, fig. 4.

3993. **Cladophlebis ungeri** (Dunker) Ward. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 228, pl. 65, fig. 16.

See Aspidium dunkeri.

8346. **Cladophlebis vaccensis** Ward. Type.
2526. Jurassic. Cape Lisburne, Alaska.

Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 157, pl. 39, fig. 7.

See Pecopteris denticulata.

3285. **Cladophlebis virginiensis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 70, 71, pl. 3, figs. 3–8; pl. 4, figs. 1, 3–6.

7370. **Cladophlebis wyomingensis** Fontaine. Type.
Lakota (Low. Cret.). East bank Oak Creek near Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 656, pl. 160, figs. 16, 17.

3341. **Cladophlebis** sp.? Fontaine.
Potomac (Low. Cret.). Fredericksburg; hillside at Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 76, pl. 10, figs. 5, 8; pl. 20, fig. 7.

30965. **Clathopteris platyphylla expansa** Saporta.
30966. Illustrated specimen.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 54, pl. 33, fig. 1; pl. 35, fig. 2.

534. **Coccoloba lævigata** Lesquereux. Illustrated specimen.
Laramie (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 208, pl. 35, fig. 7.

4160 to 4164. **Cocculus haydenianus** Ward. Types.
Fort Union (Tert.). Burns's Ranch, twenty-eight miles below Glendive, and Iron Bluff, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 100, pl. 47, figs. 1–4; pl. 48, fig. 1.

=Cebatha haydeniana.

50040. **Colutea primordialis** Heer. Illustrated specimen.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 148, pl. 13, fig. 8.

8247. **Comephyllum cristatum** Emmons. Type.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 128, fig, 97.—Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 311, pl. 47, fig. 3.

1373. **Comptonia cuspidata** Lesquereux. Type.
Upper Eocene (Tert.). Coal Harbor, Unga Island, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., V, 1882 [1883], p. 445.

=Myrica cuspidata.

1400. **Comptonia premissa** Lesquereux. Type.
Upper Eocene (Tert.). Chignik Bay, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., V, 1883, p. 445.

=Myrica premissa.

3279. **Conospermites ellipticus** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 279, pl. 138, fig. 14.

10250. **Conostichus broadheadi** Lesquereux. Type.
Pottsville? (Penn.). Vernon County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 1, pl. B, figs. p.1, 2; Text, I, 1880, p. 15.—White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 12, pl. 2, figs. 1, 2.

10251. **Conostichus broadheadi** Lesquereux. Illustrated specimens.
Pottsville? (Penn.). Near Nevada and Fort Scott, Vernon County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 12, pl. 2, figs. 3–5.

6035. **Conostichus prolifer** Lesquereux Illustrated specimen.
Pottsville? (Penn.). Halfway between Nevada and Fort Scott, Vernon County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 13, pl. 2, fig. 6.

19058. **Cordaianthus costatus** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 80, fig. 1; Text, II, 1880, p. 540.

19212. **Cordaianthus dichotomus** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 76, figs. 6, 6b (as C. gemmifer); Text, II, 1880, p. 546.

See Cordaianthus gemmifer.

19216. **Cordaianthus ebracteatus** Lesquereux. Type.
Anthracite series, Coal A (Penn.). Boston mine, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 844.

19217. **Cordaianthus flexuosus** Lesquereux. Type.
19218. Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 802, pl. 109, fig. 2.

19187. **Cordaianthus gemmifer** Grand'Eury. Illustrated specimens.
19212. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Proc. Am. Philos. Soc., XVII, 1878, p. 326, pl. 47, figs. 5, 5a, 6, 6b; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 76, figs. 5, 5a, 6, 6b; Text, II, 1880, p. 545.

=Cordaianthus ovatus (part).
=Cordaianthus dichotomus (part).

19187. **Cordaianthus ovatus** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 76, figs. 5, 5a (as C. gemmifer); Text, II, 1880, p. 545.

See Cordaianthus gemmifer.

6073. **Cordaianthus ovatus** Lesquereux. Illustrated specimens.
19202. Cherokee, Des Moines (Penn.). Near Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv. 1899, p. 262, pl. 62, figs. 1, 2.

19214. **Cordaianthus rugosus** Lesquereux. Type.
Anthracite Series, Coal C (Penn.). Shamokin, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 803.

19211. **Cordaianthus rugosus scaber** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, p. 804.

19226. **Cordaianthus spicatus** Lesquereux. Type.
Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 802, pl. 109, fig. 1.

19007. **Cordaianthus simplex** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 538.

See Cordaites mansfieldi.

25322. **Cordaicarpon apiculatum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 83, fig. 6a; Text, II, 1880, p. 551.

25346. **Cordaicarpon cinctum** Lesquereux. Type.
25379. Anthracite series (Penn.) Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 804, 805, pl. 109, figs. 5, 6.

19059. **Cordaicarpon costatum** Lesquereux. Type.
19060. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 804, pl. 109, fig. 4.

See Cordaites costatus.

25328. **Cordaicarpon gutbieri** (Geinitz) Grand'Eury.
to Illustrated specimens.
25332. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 83, figs. 8–11; Text, II, 1880, p. 549; III, 1884, p. 804, pl. 109, fig. 3.

25345. **Cordaicarpon lineatum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 804, pl. 111, fig. 16.

25977. **Cordaicarpon mansfieldi** Lesquereux. Types.
to Allegheny (Penn.). Cannelton, Pennsylvania.
25979.

Lesquereux, Proc. Am. Philos. Soc., XVII, 1878, p. 321; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 85, fig. 21, Text, II, 1880, p. 537, pl. 87, fig. 8.

25305. **Cordaicarpon ovatum** Grand'Eury. Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 83, fig. 7; Text, II, 1880, p. 550.

Cordaicarpus. See Cordaicarpon.

19168. **Cordaistrobus grand' euryi** Lesquereux. Types.
19169. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Proc. Am. Phil. Soc., XVII, 1878, p. 328, pl. 53, fig. 3; Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 82, figs. 3, 4, 4a; Text, II, 1880, p. 552.

18946. **Cordaites communis** Lesquereux. Types.
18947. Cherokee, Des Moines (Penn). Clinton, Henry County, Missouri.

Lesquereux, Proc. Am. Phil. Soc. XVII, 1878, p. 320; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 534.

5418. **Cordaites communis** Lesquereux. Illustrated specimens.
5546. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine,
5702. Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv. 1899, p. 260, pl. 3, fig. 1; pl. 16, pl. 46.

19059. **Cordaites costatus** Lesquereux. Types.
19060. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Proc. Am. Philos. Soc., XVII, 1878, p. 323, pl. 51, figs. 1–1b; XVIII, 1879, p. 222, pl. 3, figs. 1, 2; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 80, figs. 1a, 1b; Text, II, 1880, p. 540, pl. 86, figs. 1, 2.

=Cordaicarpon costatum.

19160. **Cordaites gracilis** Lesquereux. Type.
Allegheny (Penn.). Morris, Illinois.

Lesquereux, Proc. Am. Phil. Soc., XVII, 1878, p. 322, pl. 48, figs. 4, 4b; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 77, figs. 4–4b; Text, II, 1880, p. 539.

19103 **Cordaites grandifolius** Lesquereux. Types.
to Pottsville (Penn.). Campbells Ledge, Pittston, Penn-
19105. sylvania.

Lesquereux, Proc. Am. Phil. Soc., XVII, 1878, p. 318, pl. 48, figs. 1, 2. 2a; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P., Atlas, 1879, p. 16, pl. 77, figs. 1, 2; Text, II, 1880, p. 530.

18917 **Cordaites lacoei** Lesquereux. Types.
to Anthracite series, Coal E (Penn.). Butler mine, Camp-
18919. bell's Ledge, Pittston, Pennsylvania.
18921.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P; Text, II, 1880, p. 535, pl. 87, figs. 2–4.

19006. **Cordaites mansfieldi** Lesquereux. Types.
19007. Allegheny (Penn.). Cannelton, Pennsylvania.
19017.

Lesquereux, Proc. Am. Phil. Soc., XVII, 1878, p. 321, pl. 47, figs. 4–4b; pl. 49, figs. 1, 1b, 2; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 76, figs. 4–4b; pl. 78, figs. 1. 2; Text, II, 1880, p. 537.

19007=Cordaianthus simplex (pl. 76, figs. 4, 4a).

18907. **Cordaites radiatus** Lesquereux. Types.
18908. Allegheny (Penn.). Cannelton, Pennsylvania.
18911.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 540, pl. 87, figs. 5, 6.

19033 **Cordaites serpens** Lesquereux. Types.
to Allegheny (Penn.). Cannelton, Pennsylvania.
19036.

Lesquereux, Proc. Am. Phil. Soc., XVII, 1878, p. 324, pl. 50, figs. 1–4; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 17, pl. 79, figs. 1, 1a, 2, 3, 4; Text, II, 1880, p. 542.

26421. **Cordaites squammiferus** (Lesquereux) David White. Type.
Pennsylvanian. Osage, Kansas.

David White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 108.

4155. **Cornus emmonsii** Ward. Types.
4156. Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 55, pl. 26, figs. 2, 3.
=Cornus impressa.

5357. **? Cornus fosteri** Ward. Type.
Fort Union (Tert.). Upper Seven Mile Creek, ten miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 54, pl. 25, fig. 5.

2454. **Cornus hyperborea** Heer. Illustrated specimen.
Eocene (Tert.). Lassen County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 29, pl. 15, fig. 3.

354. **Cornus impressa** Lesquereux. Type.
Denver (Cret.). Mount Bross, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 408; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 243, pl. 42, fig. 3.

4155. **Cornus impressa** Lesquereux. See Cornus emmonsii.
4156.

4406. **Cornus newberryi** Hollick. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 749, pl. 103, fig. 6.

50141. **Cornus platyphylloides** Lesquereux. Type.
Dakoka (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 126, pl. 64, fig. 15.

357. **Cornus rhamnifolia** Weber. Illustrated specimen.
Montana (Cret.). Near Point of Rocks, Wyoming.

Lesquereux. Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 244, pl. 42, fig. 6.

355. **Cornus studeri?** Heer. Illustrated specimens.
356. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 244, pl. 42, figs. 4, 5.

4154. **Cornus studeri?** Heer. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 55, pl. 26, fig. 1.

353. **Cornus suborbifera** Lesquereux. Type.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 243, pl. 42, fig. 2.

4424. **Cornus wrightii** Knowlton. Type.
Miocene (Tert.). Fossil Forest section, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 749, pl. 103, figs. 4, 5.

4209. **Corylus americana** Walter. Illustrated specimens.
4212. Fort Union (Tert.). Seven Mile Creek, below Glendive,
5314. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 28, pl. 11, figs. 3–5; pl. 12, figs. 1, 2.

553 **Corylus americana** Walter. Illustrated specimens.
to Fort Union (Tert.). Fort Union, North Dakota.
555.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 59; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 14, figs. 8, 9, 10.

=Corylus americana fossilis.

553 **Corylus americana fossilis** Newberry. Types.
to Fort Union (Tert.). Fort Union, North Dakota.
555.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 60, pl. 29, figs. 8–10.

See Corylus americana.

4207. **Corylus fosteri** Ward. Types.
4208. Fort Union (Tert.). Head of Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 29, pl. 13, figs. 5, 6.

558. **Corylus grandifolia** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 59; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 15, fig. 5.

=Corylus macquarrii.

30072. **Corylus harrimani** Knowlton. Type.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 156, pl. 23, fig. 1.

535. **Corylus macquarrii** (Forbes) Heer. Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 144, pl. 18, fig. 10.

7076. **Corylus macquarrii** (Forbes) Heer. Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 61, pl. 48, fig. 4.

558. **Corylus macquarrii** (Forbes) Heer. Illustrated specimen.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 61, pl. 32, fig. 5.

See Corylus grandifolia.

4206. **?Corylus macquarrii** (Forbes) Heer. Illustrated specimen.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 30, pl. 13, fig. 7.

5060. **Corylus macquarrii** (Forbes) Heer. Illustrated specimen.
Miocene (Tert.). Middle Station, Fossil Forest, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 699, pl. 86, fig. 3.

5398. **Corylus macquarrii** (Forbes) Heer. Illustrated specimens.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 219, pl. 9, fig. 4.

6969. **Corylus orbiculata** Newberry. Type.
Fort Union (Tert.). Near Fort Union, Buford County, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 58; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 15, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 62, pl. 32, fig. 4.

30069. **Corylus ? palachei** Knowlton. Types.
30083. Eocene (Tert.). Kukak Bay, Alaska.
30095.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 156, pl. 22, fig. 2; pl. 28, fig. 1.

557. **Corylus rostrata** Aiton. Illustrated specimens.
6979. Fort Union (Tert.). Fort Union, North Dakota.
6980.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 60; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 15, figs. 1–3.

=Corylus rostrata fossilis.

4213 **Corylus rostrata** Aiton. Illustrated specimens.
to Fort Union (Tert.). Seven Mile Creek, below Glendive,
4216. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 29, pl. 13, figs. 1–4.

557. **Corylus rostrata fossilis** Newberry. Types.
6979. Fort Union (Tert.). Fort Union, Buford County, North
6980. Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 63, pl. 32, figs. 1–3.

See Corylus rostrata.

483. **Cratægus ? æquidentata** Lesquereux. Types.
819. Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 297, pl. 58, figs. 4, 4a.

7088. **Cratægus flavescens** Newberry. Type.
Upper Eocene (Tert.) Bridge Creek, Crook County. Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 507; Mon. XXXV, U. S. Geol. Surv., 1898, p. 112, pl. 48, fig. 1.

1647 to 1651. **Cratægus flavescens** Newberry. Supplemental type.
Green River (Tert.). Florissant, Colorado.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 77.
See Myrica diversifolia.

8489. **Cratægus flavescens** Newberry. Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 66, pl. 10, fig. 1.

2380. **Cratægus holmesii** Lesquereux. Type.
Denver (Cret.). Silver Cliff, Colorado.
Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 43, pl. 3, figs. 7–9.

8513. **Cratægus imparilis** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, pp. 66, 67, pl. 10, fig. 2.

50140. **Cratægus lacoei** lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 143, pl. 64, fig. 14.

2458. **Cratægus marcouiana** Lesquereux. Type.
Horizon unknown. "Fossil Point, P. Y. Sheet."
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 36, pl. 15, figs. 1, 2.

2459. **Cratægus marcouiana subintegrifolia** Lesquereux. Type.
Horizon unknown. "Fossil Point, P. Y. Sheet."
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 36, pl. 14, fig. 2.

2699. **Cratgæus tenuinervis** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 142, pl. 54, fig. 6.

4192. 4200. **? Credneria daturæfolia** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 97, pl. 13, fig. 4; pl. 43, figs. 1, 2; pl. 44, figs. 1–3; pl. 45, figs. 1, 2.

4352. 5129. **Credneria? pachyphylla** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 742, pl. 101, fig. 6.

3325. **Ctenis imbricata** Fontaine. Type.
Potomac (Low. Cret.) Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 177, pl. 138, figs. 10–12.

3464. **Ctenophyllum braunianum** Geoppert. Illustrated specimens. Triassic. Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 69, pl. 34, figs. 2–4; pl. 35, fig. 1; pl. 37, figs. 1–2; pl. 38, figs. 1–2.

8217 to 8219. **Ctenophyllum braunianum angustum** (Fr. Braun) Ward. Illustrated specimens. Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 291, pl. 39, figs. 6, 7.

See Dioonites linearis, Podozamites longifolius, and Pterozamites spatulatus.

30977. **Ctenophyllum giganteum** Fontaine. Type. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 76, pl. 39, fig. 5.

30880. **Ctenophyllum grandifolium** Fontaine. Type. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 73, pl. 39, fig. 3.

3372. **Ctenophyllum latifolium** Fontaine. Type. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 175, pl. 68, figs. 2, 3.

8220. **Ctenophyllum lineare** (Emmons) Fontaine. Type. Triassic. House's quarry, Haw River, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 114, pl. 54, fig. 2; in Ward, Twentieth Ann. Rept. U. S. Geol. Surv. Pt. II, 1900, p. 293.

8221. **Ctenophyllum robustum** (Emmons) Fontaine. Type. Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 116, pl. 54, fig. 7; in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 294.

See Pterophyllum robustum.

30883. **Ctenophyllum taxinum** (Lindley and Hutton) Fontaine. Illustrated specimen. Triassic. Midlothian, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 67, pl. 33, fig. 3.

30879. **Ctenophyllum truncatum** Fontaine. Type. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 68, pl. 38, fig. 5.

3434. **Ctenopteris angustifolia** Fontaine. Type. Potomac (Low. Cret.). Roadside near Potomac Run (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 159, pl. 65, fig. 2; pl. 67, fig. 4.

3203. **Ctenopteris insignis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 156, pl. 61, figs. 4, 5; pl. 62, fig. 1; pl. 63, figs. 1, 3.

3384. **Ctenopteris integrifolia** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 158, 159; pl. 62, fig. 2; pl. 65, fig. 3.

3450. **Ctenopteris longifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 159, pl. 67, fig. 5.

3347. **Ctenopteris minor** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 157, 158, pl. 67, fig. 3.

3305. **Ctenopteris virginiensis** Fontaine. Type.
Potomac (Low. Cret.). Fredricksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 157, pl. 62, fig. 4; pl. 65, fig. 1; pl. 66, fig. 4.

1412. **Cucumites lesquereuxii** Knowlton. Type.
Miocene? (Tert.). Brandon, Vermont.

Knowlton, Bull. Torrey Bot. Club, XXIX, 1902, pp. 640, 641, pl. 25, figs. 3, 4.

7661. **Cunninghamites** sp. Knowlton.
Montana (Cret.). North Fork Dutton Creek, Laramie Plains, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 29, pl. 5, fig. 3.

3652. **Cupressinoxylon arkansanum** Knowlton. Types.
3660. Orange sand (Tert.). Little Crow Creek, Arkansas.
3661.

Knowlton, Ann. Rept. Geol. Surv. Ark. for 1889, II, 1890, p. 253, pl. 9, figs. 1, 2.

3653. **Cupressinoxylon calli** Knowlton. Type.
Tertiary. Northwest of Gainesville, Green County, Arkansas.

Knowlton, Ann. Rept. Geol. Surv. Ark. for 1889, Vol. II, 1890, p. 254, pl. 9, figs. 3–7.

3649. **Cupressinoxylon columbianum** Knowlton. Types.
3650. Potomac (Low. Cret.). Dutch Gap Canal, James River, Virginia.

Knowlton, Bull. No. 56, U. S. Geol. Surv., 1889, p. 49, pl. 4, fig. 5; pl. 5, figs. 3, 4; pl. 6, figs. 1–5; pl. 7, fig. 1.

3641. **Cupressinoxylon elongatum** Knowlton. Type.
Fort Union (Tert.). Glendive, Dawson County, Montana.

Knowlton, Proc. U. S. Nat. Mus., XI, 1888, p. 7, pl. 3, figs. 1–4.

3642. **Cupressinoxylon glasgowi** Knowlton. Type.
Cretaceous? Emmet County, Iowa.

Knowlton, Proc. U. S. Nat. Mus., XI, 1888, p. 6, pl. 2, figs. 1–5.

3046 to 3048. **Cupressinoxylon mcgeei** Knowlton. Types.
Potomac (Low. Cret.). Washington, District of Columbia.

Knowlton, Bull. No. 56, U. S. Geol. Surv., 1889, p. 46, pl. 2, fig. 5; pl. 3, figs. 1–5.

3643. **Cupressinoxylon pulchellum** Knowlton. Type.
Potomac (Low. Cret.). Spring Hill, Appomattox River, Virginia.

Knowlton, Bull. No. 56, U. S. Geol. Surv., 1889, p. 45, pl. 2, figs. 1–4.

3644. 3645. **Cupressinoxylon wardi** Knowlton. Types.
Potomac (Low. Cret.). Near Montello, District of Columbia and Neabsco Creek, Virginia.

Knowlton, Bull. No. 56, U. S. Geol. Surv., 1889, p. 48, pl. 4, figs. 1–4; pl. 5, figs. 1, 2.

8805. **Cycadeoidea colei** Ward. Type.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 619, pls. 110–112.

8807. **Cycadeoidea colossalis** Ward. Type.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, pp. 603, 604, pls. 67, 68.

8804. **Cycadeoidea dacotense** (McBride) Ward.
Illustrated specimen.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 602, pls. 62, 63.

8232. **Cycadeoidea emmonsi** (Fontaine) Ward. Type.
Triassic. Chatham County, North Carolina.

Emmons, Amer. Geol., VI, 1857, p. 124, fig. 92a (unnamed).—Ward, Proc. Biol. Soc. Wash., IX, 1894, p. 86; Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 302, pl. 43, fig. 3.

8820. **Cycadeoidea excelsa** Ward. Type.
Lakota (Low. Cret.). Near Hot Springs, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 637, pls. 153–155.

8821 to 8825. **Cycadeoidea jenneyana** Ward. Types.
Lakota (Low. Cret.). Near Minnekahta, Blackhawk and Black's ranch, Meade County, South Dakota.

Ward, Proc. Biol. Soc. Wash., IX, 1894, p. 87, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 627.

8809 to 8814. **Cycadeoidea mcbridei** Ward. Types.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 612, pls. 91–93.

8827. **Cycadeoidea minima** Ward. Type.
Lakota (Low. Cret.). Southeast of Minnekahta, Fall River County, South Dakota.

Ward, Amer. Journ. Sci., X, 1900, p. 341.

8808. **Cycadeoidea minnekahtensis** Ward. Type.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 606, pl. 76–79.

8815 to 8818. **Cycadeoidea occidentalis** Ward. Type.
Lakota (Low. Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 626, pl. 120.

8065. 8066. **Cycadeoidea paynei** Ward. Types.
Lakota (Cret.). Near Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 620, pls. 113–115.

8828. **Cycadeoidea protea** Ward. Type.
Lakota (Low. Cret.). Bradley's Flat, southwest of Minnekahta, Fall River County, South Dakota.

Ward, Amer. Journ. Sci., X, 1900, p. 343.

8806. **Cycadeoidea pulcherrima** Ward. Type.
Lakota (Cret.). Southwest of Minnekahta, Fall River County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 608, pls. 80–82.

8826. **Cycadeoidea stillwelli** Ward. Type.
Lakota (Low. Cret.) Black's Ranch, north of Blackhawk, Meade County, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 635, pl. 147.

2316. **Cycadeospermum æquilaterale** Lesquereux. Type.
Jurassic. Oxford, England.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 32.

3954. **Cycadeospermum angustum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 271, pl. 135, fig. 20.

3436. 3904. **Cycadeospermum ellipticum** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 271, pl. 135, fig. 19.

2318½. **Cycadeospermum faboideum** Lesquereux. Type.
Jurassic. Oxford, England.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 33.

50024. **Cycadeospermum lineatum** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 30, pl. 1, fig. 14.

3756. **Cycadeospermum rotundatum** Fontaine.
Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 279, pl. 43, fig. 6.

7416. **Cycadeospermum rotundatum** Fontaine.
Illustrated specimen.
Lakota (Low. Cret.). Near Robbins's Ranch, Oak Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 667, pl. 162, fig. 19.

3955. **Cycadeospermum spatulatum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 271, pl. 135, figs. 11, 12.

2319. **Cycadeospermum subfalcatum** Lesquereux? Type.
Jurassic. Oxford, England.

Lesquereux, Proc. U. S. Nat.Mus. X, 1887, p. 33.

8229. **Cycadites acutus** Emmons. Type.
Triassic. Lockville or Jones Falls, Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties of North Carolina, 1856, p. 330; Amer., Geology, VI, 1857, p. 114, fig. 81.—Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 109, pl. 51, fig. 3; in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 300

3498. **Cycadites tenuinervis** Fontaine. Type.
Triassic. Hanover County, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 84, pl. 44, figs. 4–6.

8230. **Cycadites tenuinervis** Fontaine. Illustrated specimen.
Traissic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 300, pl. 43, fig. 1.

8793. **Cyclocladia brittsii** David White. Type.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 169, pl. 49, fig. 1.

8326. **Cyclopteris** cf. **acadica** Dawson. Illustrated specimen.
Upper Devonian. Near Penn Yan, Yates County, New York.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 107, pl. 9, fig. 2.

1295. **Cyclopteris (Archæopteris) alleghanensis** Meek. Type.
Pocono (Miss.). Lewis tunnel, West Virginia.

Meek, Bull. Phil. Soc. Washington, II, 1875–1880, Appendix, p. 43, pl. 1, figs. 2a, b.

=Triphyllopteris alleghanensis.

2190. **Cyclopteris? (Archæopteris) lescuriana** Meek. Type.
Pocono (Miss.). Lewis tunnel, West Virginia.

Meek, Bull. Phil. Soc. Washington, II, 1875–1880, Appendix, p. 41, pl. 2, figs. 1, a, b, c.

=Triphyllopteris lescuriana.

2008. **Cyclopteris virginiensis** Meek. Type.
Pocono (Miss.). Lewis Tunnel, West Virginia.

Meek, Bull. Phil. Soc. Washington, II, 1879–1880, Appendix, p. 43, pl. 1, figs. 3, a, b, c.

=Triphyllopteris virginiana.

5066. **Cyperacites giganteus** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 684, pl. 82, fig. 10.

1564. **Cyperacites haydenii** (Lesquereux) Knowlton. Types.
1565. Green River (Tert.). Northeast of Randolph, Uinta County, Wyoming.

Knowlton Bull. No. 152, U. S. Geol. Surv., 1898, p. 83.

See Cyperites haydenii.

8542. **Cyperacites** sp. Knowlton.
Mascall beds, Miocene (Tert.). South Fork of John Day River, about twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 28, pl. 1, fig. 9.

4496. **Cyperacites** sp. Knowlton.
Fort Union (Tert.). Northeast side of Crescent Hill, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 685, pl. 83, fig. 6.

1564. **Cyperites haydenii** Lesquereux. Types.
1565. Green River (Tert.). Northeast of Randolph, Uinta County, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv., Terr., VIII, Pt. III, 1883, p. 140, pl. 23, figs. 1, 2.

=Cyperacites haydenii.

4495. **Cyperites** sp. Knowlton.
Miocene (Tert.). Cliff west of Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 684, pl. 83, fig. 4.

122. **Cyperus chavanensis** Heer. Illustrated specimen.
Green River (Tert.). Green River Station, Wyoming. (Evanston, Utah?).

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 92, pl. 9, fig. 1.

=Cyperus chavannesi.

122. **Cyperus chavannesi** Heer. Illustrated specimen.
Green River (Tert.). Green River Station, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 84.

See Cyperus chavanensis.

1916. **Cytisus florissantianus** Lesquereux. Types.
1917. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 200, pl. 39, fig. 14.

1913 **Cytisus modestus** Lesquereux. Types.
to Green River (Tert.). Florissant, Colorado.
1915. Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 200, pl. 39, figs. 9–11.

7332. **Czekanowskia nervosa** Heer. Illustrated specimens.
7333. Lakota (Low. Cret.). Webster's Ranch, northeast of Beulah, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 685, pl. 169, figs. 1, 2.

1178. **Dammarites caudatus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 32, pl. 1, fig. 10.

12710. **Danæites emersoni** Lesquereux. Types.
12711. Monongahela (Penn.). St. Clairsville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 28, figs. 1, 2; Text, I, 1880, p. 157.

12718. **Danæites macrophyllus** (Newberry) Lesquereux.
12719. Illustrated specimens.
Pottsville (Penn.). Youngstown, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 5, pl. 25, figs. 4, 5, 6, 6a; Text, I, 1880, p. 159.

8207. **Danæopsis?** sp. Fontaine.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 284, pl. 38, fig. 7.

317. **Daphnogene anglica?** Heer. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 222, pl. 37, fig. 9.

642. **Daphnogene cretacea** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 343.

=Cinnamomum scheuchzeri.

2807. **Daphnophyllum dakotense** Lesquereux. Types.
2808. Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 99, pl. 51, fig. 2; pl. 52, fig. 1.

10259. **Dechenia striata** Lesquereux. Type.
Allegheny (Penn.). Alta, Peoria County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 12, pl. 67, fig. 3; Text, II, 1880, p. 430.

19251. **Desmiophyllum gracile** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, pp. 556, 557, pl. 82, fig. 1.

4366. **Devallia? montana** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 671, pl. 79, fig. 4.

3994. **Dicksonia pachyphylla** Fontaine. Type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 224, pl. 65, fig. 1.

See Asplenioptéris pinnatifida?

8365. **Dicksonia saportana** Heer. Illustrated specimen.
(2435) Jurassic. Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 155, pl. 39, figs. 1, 2.

See Asplenium dicksonianum.

25108. **Dicranophyllum dichotomum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 553, pl. 83, fig. 9.

25104 **Dicranophyllum dimorphum** Lesquereux. Types.
to Allegheny (Penn.). Cannelton, Pennsylvania.
25106.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 554, pl. 83, figs. 1, 3.

6076. **Dicranophyllum?** sp. David White.
Cherokee, Des Moines (Penn.). Hobbs's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 272, pl. 41, fig. 10; pl. 73, fig. 1.

10200. **Dictyocordaites lacoi** Dawson. Type.
Catskill (Dev.). Meshoppen, Pennsylvania.

Dawson, Can. Rec. Sci., IV., 1890, pp. 2, 3, text fig. 1.

5406. **Dictyotites fasciolatus** Penhallow. Types.
25098. Upper Chemung or Catskill, Erian (Dev.). Lanesboro, Susquehanna County, and Factoryville, Wyoming County, Pennsylvania.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 110, pl. 11, fig. 10a; pl. 12, fig. 10b.

5407. **Dictyotites maximus** Penhallow. Type.
Marcellus shales, Erian (Dev.). Union Springs, Cayuga Lake, New York.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 111, pl. 11, fig. 11.

3215. **Dioönites buchianus** (Ettingshausen) Bornemann.
3773. Illustrated specimens.
3775. Potomac (Low. Cret.). James River, entrance to Trent's
3776. Reach; banks of Dutch Gap Canal; fishing hut above canal; Kankeys, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889. pp. 182–184, pl. 68, fig. 1; pl. 69, figs. 1, 3; pl. 70, figs. 2, 3; pl. 71, fig. 1; pl. 72, figs. 1, 2; pl. 73, figs. 1–3; pl. 74, figs. 1–3.

3216. **Dioönites buchianus angustifolius** Fontaine. Types.
3799. Potomac (Low. Cret.) Dutch Gap Canal; fishing hut above canal; Kankey's; crossing of the Occoquan, near telegraph station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 185, pl. 67, fig. 6; pl. 68, fig. 4; pl. 71, fig. 2.

3739. **Dioönites buchianus angustifolius** Fontaine.
Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 265, pl. 36, fig. 6.

3180. **Dioönites buchianus obtusifolius** Fontaine. Type.
Potomac (Low. Cret.). Left bank Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 184, 185, pl. 168, fig. 3.

3736. **Dioönites buchianus rarinervis** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 264, pl. 36, figs. 3, 4.

3738. **Dioönites dunkerianus** (Goeppert) Miquel.
Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 265, pl. 36, fig. 12; pl. 37, fig. 1.

8218. **Dioönites linearis** Emmons. Type.
Triassic. Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 121, pl. 4, fig. 11.

=Ctenophyllum braunianum angustum.

617. **Diospyros ambigua** Lesquereux. Type.
Dakota (Cret.). Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 60; Mon. XVII, U. S. Geol. Surv., 1892, p. 110.

See Diospyros anceps and Quercus anceps.

617. **Diospyros anceps** Lesquereux. Type.
Dakota (Cret.). Salt Creek, ten miles below Lancaster Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 89, pl. 6, fig. 6.

=Diospyros ambigua.
See Quercus anceps.

50075. **Diospyros apiculata** Lesquereux. Type.
Dakota (Cret.). In Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 110, pl. 14, fig. 3.

338. **Diospyros brachysepala** Al. Braun. Illustrated specimens.
339. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 232, pl. 40, figs. 7, 8.

340. **Diospyros brachysepala** Al. Braun. Illustrated specimen.
Montana? (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 232, pl. 63, fig. 6.

337. **Diospyros brachysepala** Al. Braun. Illustrated specimen.
Denver? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 232, pl. 40, fig. 10.

See Rhamnus inæqualis.

4165. **Diospyros brachysepala** Al. Braun. Illustrated specimens.
4166. Fort Union (Tert.). Burns's Ranch, and Seven Mile Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 104, pl. 49, figs. 1, 2.

342. **Diospyros copeana** Lesquereux. Type.
Green River (Tert.). Elko, Nevada.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 414; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 322, pl. 40, fig. 11.

8556. **Diospyros elliptica** Knowlton. Type.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, pp. 83, 84, pl. 16, fig. 5.

336. **Diospyros? ficoidea** Lesquereux. Types.
341. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878 p. 231, pl. 40, figs. 5, 6.

4167. **Diospyros ficoidea** Lesquereux. Illustrated specimens.
4168. Fort Union (Tert.). Burns, Ranch and Clear Creeks, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 105, pl. 49, figs. 3, 4.

4393. **Diospyros haguei** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below the mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 752, pl. 100, fig. 3.

4348. **Diospyros lamarensis** Knowlton. Types.
4378. Miocene (Tert.). Specimen Ridge, Fossil Forest; Lamar River between Cache and Chalfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 751, pl. 95, figs. 5, 6; pl. 96, fig. 4.

4169. **? Diospyros obtusata** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 105, pl. 49, fig. 5.

6899. **Diospyros primæva** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Newberry, U. S. Geol. Surv. Terr., Ill. Cret. and Tert. Plants, 1878, pl. 3, fig. 8.

=Phyllites vanonæ.

647. **Diospyros rotundifolia** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 89, pl. 30, fig. 1.

2461. **Diospyros virginiana turneri** Lesquereux. Type.
Miocene (Tert.). Contra Costa County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 35.

490. **Diospyros wodani** Unger. Illustrated specimen.
Laramie (Cret.). Evanston, Wyoming.

Lesquereux Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 233, pl. 59, figs. 1, 3.

See Calycites hexaphylla.

19. **Diplazium mülleri?** Heer. Illustrated specimens.
Denver? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 55, pl. 4, fig. 10.

=Asplenium (Diplazium) crossii.

19617. **Dolerophyllum pennsylvanicum** Dawson. Types.
19618. Pennsylvanian. Mazon Creek, Grundy Co., Illinois, and Olyphant, Pennsylvania.

Dawson, Canadian Record Sci., IV, No. 1, 1890, pp. 7, 8.

=Doleropteris pennsylvanica.

19617. **Doleropteris pennsylvanica** (Dawson) David White. Types.
19618. Pennsylvanian. Mazon Creek, Illinois. Anthracite series (Penn.). Olyphant, Pennsylvania.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 107.

See Dolerophyllum pennsylvanicum.

382. **Dombeyopsis grandifolia** Unger. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 255, pl. 47. fig. 6.

380. **Dombeyopsis obtusa** Lesquereux. Illustrated specimens.
381. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 266, pl. 47, figs. 4, 5.

377. **Dombeyopsis platanoides** Lesquereux. Types.
378. Laramie (Cret.). Above Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, 254, pl. 47, figs. 1. 2.

See Quercus platania rotundifolia.

5206. **Dombeyopsis platanoides** Lesquereux. Illustrated specimen.
Laramie (Cret.). Top of Mount Evarts, west face, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 661, pl. 78, fig. 1.

379. **Dombeyopsis trivialis** Lesquereux. Illustrated specimen.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 255, pl. 47, fig. 3.

4119. **Dryophyllum aquamarum** Ward. Types.
to Laramie (Cret.). Black Buttes, Wyoming.
4121. Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 26, pl. 10, figs. 2–4.
4123.

4122. **Dryophyllum basidentatum** Ward. Type.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 27, pl. 11, fig. 2.

=Quercus carbonensis.

4117. **Dryophyllum bruneri** Ward. Types.
4118. Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 27, pl. 10, figs. 5, 6.

=Dryophyllum subfalcatum.

4124. **Dryophyllum bruneri** Ward. Types.
4125. Laramie (Cret.). Hodge's Pass, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 27, pl. 10, figs. 7, 8.

=Dryophyllum subfalcatum.

195. **Dryophyllum crenatum** Lesquereux. Types.
196. Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 371; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 301; Ibid., 1876 [1878], p. 506; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 162, pl. 62, figs. 10, 11.

4126. **Dryophyllum falcatum** Ward. Type.
Laramie (Cret.). Hodge's Pass, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 27, pl. 11, fig. 1.

616. **Dryophyllum (Quercus) holmesii** Lesquereux. Type.
Dakota (Cret.). San Juan River, southwest Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 38, pl. 4, fig. 8.

=Quercus holmesii.
See Dryophyllum (Quercus) salicifolium.

614. **Dryophyllum latifolium** Lesquereux. Illustrated specimen.
Dakota? (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 37, pl. 4, fig. 2.

=Quercus (Dryophyllum) latifolia.

4318. **Dryophyllum longipetiolatum** Knowlton. Types.
4379. Miocene (Tert.). Fossil Forest Ridge, bed No. 7, Yellow-
4380. stone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 710, pl. 88, figs. 6, 7.

615. **Dryophyllum primordiale** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 37.

=Quercus primordialis.

616. **Dryophyllum (Quercus) salicifolium** Lesquereux. Type.
Dakota? (Cret.). San Juan River, southwest Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 340, pl. 8, fig. 2.

=Quercus holmesii Lesqx.
See Dryophyllum (Quercus) holmesii.

4117. **Dryophyllum subfalcatum** Lesquereux. See Dryophyllum bruneri. (Also catalogue numbers 4118, 4124, 4125.)

3826. **Dryopteris angustipinnata** (Fontaine) Knowlton. Type.
3269. Potomac (Low. Cret.). Entrance to Trent's Reach; fish hut above Dutch Gap Canal; Fredericksburg; hillside near Potomac Run, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 91.

See Aspidium angustipinnatum.

3152. **Dryopteris angustipinnata montanense** (Fontaine) Knowlton. Type.
Kootanie (Low. Cret.). Great Falls, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 91.

See Aspidium angustipinnatum montanense.

12. **Dryopteris arguta** (Lesquereux) Knowlton. Type.
Denver (Cret.). Golden, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 91.

See Lastrea arguta. Also Aspidium lakesii (33641–33643), Sphenopteris lakesii (15), and S. membranacea (11).

3374. **Dryopteris cystopteroides** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 91.

See Aspidium cystopteroides.

3437. **Dryopteris dentata** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Banks of Dutch Gap Canal; hillside near Potomac Run; near telegraph station, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 91.

See Aspidium dentatum.

3967. **Dryopteris elliptica** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Hillside near Potomac Run; bank near Brooke, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium ellipticum.

3913. **Dryopteris fredericksburgense** (Fontaine) Knowlton. Types.
3346. Potomac (Low. Cret.). Fredericksburg; and near tele-
3325. graph station, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium fredericksburgense.

7689 **Dryopteris? gleichenoides** Knowlton. Types.
to Esmeralda (Neocene). Esmeralda County, Nevada, 3.8
7691. kilometers northeast of Emigrant Peak.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 211, pl. 30, figs. 5–7.

3268. **Dryopteris heterophylla** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium heterophyllum.

7615. **Dryopteris idahoensis** Knowlton. Type.
Payette (Miocene). One mile southeast of Marsh Post-Office, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 721, pl. 99, figs. 1, 2.

6934. **Dryopteris kennerlyi** (Newberry) Knowlton. Type.
Puget Sound (Cret.). Nanaimo, Vancouver, British Columbia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium kennerlyi.

3829. **Dryopteris macrocarpa** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.) Bank of Dutch Gap Canal, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium macrocarpum.

3329. **Dryopteris microcarpa** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium microcarpum.

3147. **Dryopteris monocarpa** (Fontaine) Knowlton. Types.
7429. Kootanie (Low. Cret.). Great Falls, Montana.
7432.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium monocarpum.

3153. **Dryopteris montanense** (Fontaine) Knowlton. Type.
Kootanie (Low. Cret.). Great Falls, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium montanense.

3344. **Dryopteris parvifolia** (Fontaine) Knowlton. Type.
3822. Potomac (Low. Cret.). Fredericksburg; banks of Dutch
3823. Gap Canal; fish hut above Dutch Gap Canal, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 92.

See Aspidium parvifolium.

24. **Dryopteris (Lastrea) polypodioides?** (Ettingshausen) Knowl-
25. ton. Supplemental type.
Laramie? (Cret.). Sand Creek, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 93.

See Lastrea (Goniopteris) polypodioides? and Goniopteris polypodioides.

3426. **Dryopteris virginica** (Fontaine) Knowlton. Type.
3827. Potomac (Low. Cret.) Roadside near Potomac Run; 72d milepost, near Brooke, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 1.

See Aspidium virginicum.

5379. **Dryopteris virginica** (Fontaine) Knowlton. Type.
See Aspidium virginicum.

4389. **Dryopteris weedii** Knowlton. Types.
5135. Fort Union (Tert.). Cliff on Yellowstone River and Canyon above mouth of Hell Roaring Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 669, pl. 80, fig. 8; pl. 81, fig. 2.

5072. **Dryopteris xantholithense** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 671, pl. 81, fig. 1.

5297. **Elæodendron polymorphum** Ward. Types.
5301. Fort Union (Tert.). Burns's Ranch, below Glendive, Mon-
5313. tana.
5372.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 84, pl. 38, figs. 1–7.

5315. **Elæodendron serrulantum** Ward. Types.
5316. Fort Union (Tert.). Burns's Ranch, below Glendive, Mon-
5371. tana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p, 83, pl. 37, figs. 3–5.

646. **Embothrium? daphneoides** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 87, pl. 30, fig. 10.

3398. **Encephalartopsis nervosa** Fontaine. Types.
3793. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 174, pl. 70, fig. 4; pl. 71, figs. 3, 4; pl. 72, figs. 3, 4.

18236. **Equisetites gracilis** Lesquereux. Type.
Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P. Text, III, 1884, pp. 729, 730, pl. 90, fig. 5.

18250. **Equisetites occidentalis** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Ill.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P. Text, I, 1880, p. 62, pl. 3, fig. 15.

2880. **Equisetum abiquiense** Fontaine. Type.
Triassic. Copper mines near Abiquiu, New Mexico.

Fontaine (in Fontaine and Knowlton), Proc. U. S. Nat. Mus. XIII, 1890, p. 283, pl. 22, fig 1.

5094. **Equisetum canaliculatum** Knowlton. Types.
5105. Miocene (Tert.). Specimen Ridge, opposite Junction
5223. Butte, Yancey Fossil Forest, and Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 675, pl. 81, figs.6, 7.

5075. **Equisetum deciduum** Knowlton. Type.
Miocene (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 676, pl. 81, fig. 5.

5061. **Equisetum haguei** Knowlton. Types.
5139. Miocene (Tert.). Southeastern end of hill north of Lost Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 674, pl. 81, figs. 3, 4.

38. **Equisetum haydenii** Lesquereux. Types.
39. Green River (Tert.). Barrel Springs, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. and Geog. Surv. Terr., 1871, [1872], p. 284; idem., 1872 [1873], p. 385; idem., 1874 [1876], p. 67, pl. 6, figs. 2, 3.

40. **Equisetum haydenii** Lesquereux. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 67, pl. 6, fig. 4.

2464. **Equisetum hornii** Lesquereux. Type.
Eocene (Tert.). Cherry Creek, Wasco County, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 23.

=Equisetum oregonese.

2281. **Equisetum knowltoni** Fontaine. Type.
Triasic. Copper mines, Albiquiu, New Mexico.

Fontaine (in Fontaine and Knowlton), Proc. U. S. Nat. Mus., XIII, 1890, p. 283, pl. 23, figs. 3, 4.

43. **Equisetum lævigatum** Lesquereux. Type.
Laramie (Cret.). Sand Creek, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 395; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 68, pl. 6, fig. 6.

42. **Equisetum lævigatum** Lesquereux. Illustrated specimen.
Laramie (Cret.) Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv., Terr., VII, Pt. II, 1878, p. 68, pl. 6, fig. 6.

41. **Equisetum lesquereuxii** Knowlton. Type.
Miocene? (Tert.). Near Yellowstone Lake, Yellowstone National Park.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 94.

See Equisetum limosum?

41. **Equisetum limosum**? Linnæus. Illustrated specimen.
Miocene? (Tert.). Near Yellowstone Lake, Yellowstone National Park.

Lesquereux, Ann. Rept. U. S. Geol. Surv., 1871 [1872], p. 299; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 69, pl. 6, fig. 5.

=Equisetum lesquereuxii.

3245. **Equisetum lyelli** Mantell. Illustrated specimen.
Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 65, pl. 1, fig. 7; pl. 2, figs. 4, 5.

3280. **Equisetum marylandicum** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 65, pl. 2, fig. 10.

7099. **Equisetum oregonense** Newberry. Type.
Upper Eocene? (Tert.). McBees Canyon (Currant Creek?), Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 503; Mon. XXXV, U. S. Geol. Surv., 1898, p. 14, pl. 65, fig. 7.

2464. **Equisetum oregonense** Newberry. Supplemental type.
Eocene (Tert.). Cherry Creek, Wasco County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 22.

See Equisetum hornii.

3479. **Equisetum rogersi** Schimper. Illustrated specimen.
Triassic. Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 10, pl. 1, fig. 2; pl. 2, figs. 1, 2.

3734. **Equisetum texense** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 263, pl. 36, fig. 1.

3274. **Equisetum virginicum** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 63, 64, pl. 1, figs. 1–6, 8; pl. 2, figs. 1–3, 6, 7, 9.

7387. **Equisetum virginicum** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). North side Pine Creek near Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 650, pl. 160, fig. 1.

7045. **Equisetum wyomingense** Lesquereux. Illustrated specimen.
Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 15, pl. 65, fig. 8.

8503. **Equisetum** sp. Knowlton.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 23, pl. 1, fig. 1.

6903. **Eremophyllum fimbriatum** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 107, pl. 8, fig. 1.

See Ficus? fimbriata.

5699 to 5701. 6036. **Eremopteris bilobata** David White. Types.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 19, pl. 4; pl. 5, figs. 4–6.

15009. **Eremopteris cheathami** Lesquereux. Types.
15025 to 15027. Pottsville (Penn.). Privett's coal bank, Washington County, Arkansas, and Tracy, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 770, pl. 104, figs. 2–4.

30853. **Eremopteris missouriensis** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Near Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 53, figs. 8, 8a; Text, I, 1880, p. 295.

5670. **Eremopteris missouriensis** Lesquereux. Illustrated specimen.
Cherokee, Des Moines (Penn.). Hobb's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 16, pl. 5, fig. 1.

5657. **Eremopteris missouriensis** Lesquereux. Illustrated specimen.
5659. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry
5681. County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 16, pl. 5, figs. 2, 3; pl. 6, fig. 1.

14213. **Eremopteris solida** (Lesquereux) David White. Types.
14214. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 88.

See Sphenopteris solida.

137. **Eriocaulon ? porosum** Lesquereux. Type.
Laramie ? (Cret.). Sand Creek, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 396; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 106, pl. 16, fig. 2.

3273. **Eucalyptophyllum oblongifolium** Fontaine. Type.
Potomac (Low. Cret.). 72d mile post, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 325, pl. 162, fig. 4.

489. **Eucalyptus ? americana** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Suppl. Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1871 [1872], p. 7; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874, p. 296, pl. 59, figs. 11, 12.

3082. **Eucalyptus dakotensis** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 137, pl. 37.

488. **Eucalyptus hæringiana ?** Ettingshausen.
Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 296, pl. 59, fig. 10.

2693. **Eugenia primæva** Lesquereux. Types.
2762. Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 137, pl. 53, figs. 6–8.

1585. **Euonymus flexifolius** Lesquereux. Type.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 183, pl. 38, fig. 13.

5304. **Euonymus xantholithensis** Ward. Types.
5305. Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 82, pl. 37, figs. 1, 2.

620. **Fagus cretacea** Newberry. Type.
Dakota (Cret.). Smoky Hill, Kansas.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 23; U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 2, fig. 3; Mon. XXXV, U. S. Geol. Surv., 1898, p. 68, pl. 2, fig. 3.

164. **Fagus feroniæ** Unger. Illustrated specimens.
165. Green River (Tert.). Elko, Nevada.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 146, pl. 19, figs. 2, 3.

8563. **Fagus ferruginea** Aiton. Type.
Interglacial (Pleistocene). Morgantown, West Virginia.

Knowlton in I. C. White, Amer. Geol., XVIII, 1896, p. 371.

50020. **Fagus orbiculatum** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 51, pl. 47, fig. 6.

619. **Fagus polyclada** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 95; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 67, pl. 5, fig. 6.

5126. **Fagus undulata** Knowlton. Types.
5138. Fort Union (Tert.). Bluff on Yellowstone River, one mile
5185. above mouth of Elk Creek, and Fossil Forest beds, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 700, pl. 85, figs. 4, 5.

3456. **Feildeniopsis crassinervis** Fontaine. Type.
3795. Potomac (Low. Cret.). Kankeys, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 205, pl. 85, fig. 5.

7377. **Feistmantelia oblonga** Ward. Type.
Lakota (Low. Cret.). Cliff north side of Pine Creek, west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 693, pl. 169, fig. 19.

3271. **Ficophyllum crassinerve** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; Deep Bottom; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 291, 292, pl. 144 fig. 3; pl. 145, fig. 3; pl. 146, fig. 1; pl. 147, fig. 4; pl. 148, figs. 1, 2, 4; pl. 157, fig. 4; pl. 173, fig. 10.

3393. **Ficophyllum eucalyptoides** Fontaine. Type.
3919. Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 294, pl. 164, figs. 1, 2.

3188. **Ficophyllum serratum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 294, pl. 145, fig. 2; pl. 149, fig. 9.

7367. **Ficophyllum serratum** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff east bank Oak Creek, two miles below Robbins's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 689, pl. 169, fig. 8.

3229. **Ficophyllum tenuinerve** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 292, 293, pl. 140, fig. 3; pl. 141, fig. 2; pl. 145, figs. 1, 4; pl. 147, fig. 2; pl. 149, figs. 1, 3, 5; pl. 156, fig. 1.

7105. **Ficus? alaskana** Newberry. Types.
7106. Eocene (Tert.). Cook Inlet, Alaska.
7111.
7112. Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 512; Mon. XXXV, U. S. Geol. Surv., 1898, p. 84, pl. 51, fig. 1; pl. 52, fig. 1; pl. 55, figs. 1, 2.

50054 **Ficus aligera** Lesquereux. Types.
to Dakota (Cret.). Pipe Creek, Cloud County, Kansas.
50056.
50128. Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 84, pl. 10, figs. 3, 6.

1601. **Ficus alkalina** Lesquereux. Types.
1602. Green River (Tert.). Alkali Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 164, pl. 44, figs. 7, 9.

7599. **Ficus? applegatei** Knowlton. Type.
Miocene (Tert.). Three miles southeast of Ashland, Oregon.

Knowlton, Proc. Biol. Soc. Wash., XV, 1902, p. 86.

See Ficus? hesperia.

258. **Ficus arenacea** Lesquereux. Types.
260a. Laramie? (Cret.). Locality uncertain.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 300; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 195, pl. 29, figs. 1, 3, 4.

=Ficus lanceolata (part).

259. **Ficus arenacea brevipetiolata** Lesquereux. Types.
261. Laramie? (Cret.). Locality uncertain.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 195, pl. 29, figs. 2–5.

See Ficus gaudini.

290 to 292. 546. 547. **Ficus asarifolia** Ettingshausen. Illustrated specimens.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 207, pl. 61, figs. 18–21.

266. 266a. 267. **Ficus auriculata** Lesquereux. Illustrated specimens.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept., U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 206, pl. 30, figs. 4–6.

268. **Ficus auriculata** Lesquereux. See Ficus subtruncata.
269.
270.

802. **Ficus clintoni** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 393.

=Ficus planicostata clintoni.

7085. **Ficus? condoni** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 512; Mon. XXXV, U. S. Geol. Surv., 1898, p. 85, pl. 57, fig. 1.

4106. **Ficus crossii** Ward. Type.
Laramie (Cret.). Golden, Colorado.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 39, pl. 21, fig. 2.

6938. **Ficus? cuneatus** Newberry. Type.
Puget Sound (Cret.). Point Doughty, Orcas Island, Washington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 524.

=Nyssa? cuneata.

293. 294. 581a. **Ficus dalmatica** Ettingshausen. Illustrated specimens.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, 199, pl. 63, figs. 3–5.

4377. **Ficus deformata** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 712, pl. 91, fig. 2.

4331. **Ficus densifolia** Knowlton. Types.
4400. Fort Union (Tert.). Foot of bluff, Yellowstone River,
4410. one-half mile below mouth of Elk Creek, hill north of
4489. Lost Creek, and southeast side Crescent Hill, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 714, pl. 89, fig. 1; pl. 90, figs. 1, 2; pl. 91, fig. 1.

743. **Ficus distorta** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 393; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 342, pl. 5, fig. 5; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 48, pl. 14, fig. 4.

6903. **Ficus? fimbriata** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 96.

= Eremophyllum fimbriatum.

3432. **Ficus fredericksburgensis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 295, pl. 148, figs. 3, 5.

259. **Ficus gaudini** Lesquereux. Types.
261. Laramie? (Cret.). Locality uncertain.

Lesquereux, Ann. Rept. U. S Geol. Surv. Terr., 1871 [1872], p. 300.

= Ficus arenacea brevipetiolata.

4493. **Ficus haguei** Knowlton. Type.
Miocene (Tert.). Middle stratum Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 715, pl. 90, fig. 3.

263. **Ficus haydenii** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 394; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 197, pl. 30, fig. 1.

7649. **Ficus hesperia** Knowlton. Type.
Montana (Cret.). North Fork Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 45, pl. 9, fig. 5.

7599. **Ficus? hesperia** Knowlton. Illustrated specimen.
Miocene (Tert.). Three miles southeast of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 45, pl. 2, fig. 4.

= Ficus? applegatei.

2771. **Ficus inaequalis** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 82, pl. 50, fig. 3.

295. **Ficus irregularis** Lesquereux. Illustrated specimens.
296. Montana (Cret.). Point of Rocks, Wyoming.
297. Denver (Cret.). Golden, Colorado.
831. Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 196, pl. 34, figs. 4–7.

See Ulmus? irregularis.

4104. **Ficus irregularis** Lesquereux. Illustrated specimen.
4105. Denver (Cret.). Golden, Colorado.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 38, pl. 20, figs. 4, 5.

255. **Ficus jynx** Unger. Illustrated specimen.
Green River (Tert.). Elko Station, Nevada.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 193, pl. 28, fig. 6.

2706. **Ficus krausiana** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 81, pl. 50, fig. 5.

7684. **Ficus lacustris** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 215, pl. 30, fig. 26.

252. **Ficus lanceolata** Heer. Illustrated specimens.
253. Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 192, pl. 28, figs. 1–3.

260a. **Ficus lanceolata** Heer. Illustrated specimen.
Laramie? (Cret.). Locality uncertain.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1871, [1872], p. 300; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 195, pl. 29, fig. 2.

See Ficus arenacea (part).

50129. **Ficus lanceolata acuminata** Ettingshausen. Illustrated specimen.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 85, pl. 13, fig. 4.

278. **Ficus latifolia** (Lesquereux) Knowlton. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 102.

See Ficus planicostata latifolia.

634. **Ficus laurophylla** Lesquereux. Types.
635. Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 342, pl. 5, fig. 7, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 49, pl. 1, figs. 12, 13.

=Ficus reticulata.

See Laurophyllum reticulatum.

4108. **Ficus limpida** Ward. Type.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 42, pl. 22, fig. 3.

7101. **Ficus membranacea** Newberry. Type.
Eocene (Tert.). Cook Inlet, Alaska.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 512; Mon. XXXV, U. S. Geol. Surv., 1898, p. 87, pl. 59, fig. 2.

2638. **Ficus multinervis** Heer. Illustrated specimen.
Upper Tertiary. Boaz Station, Graves County, Kentucky.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 11, pl. 4, figs. 2, 3.

256. **Ficus oblanceolata** Lesquereux. Types.
257. Laramie? (Cret.). Carbon Station, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 387; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 194, pl. 28, figs. 9, 11, 12.

281. **Ficus occidentalis** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 200, pl. 32, fig. 4.

8543. **Ficus? oregoniana** Lesquereux. Type.
(2475) Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 18, pl. 9, fig. 3.—Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 56, pl. 10, fig. 3.

264. **Ficus ovalis** Lesquereux. Type.
Denver? (Cret.). Plum Creek, Pleasant Park, Colorado.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 387; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 313; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, p. 198, pl. 30, fig. 2.

7084. **Ficus planicostata** Lesquereux. Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 88, pl. 46, fig. 1.

271 **Ficus planicostata** Lesquereux. Illustrated specimens.
to Laramie (Cret.). Black Buttes, Wyoming.
277.
279. Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 201,
280. pl. 31, figs. 1–8, 10, 11.

7666. **Ficus planicostata** Lesquereux. Illustrated specimen.
Montana (Cret.). Dunn's Ranch, near Harper, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 52, pl. 10, fig. 4.

285. **Ficus planicostata clintoni** (Lesquereux) Knowlton. Types.
802. Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 103.

See Ficus planicostata goldiana and Ficus clintoni.

285. **Ficus planicostata goldiana** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv., VII, Pt. II, 1878, p. 202, pl. 33, fig. 2.

=Ficus planicostata clintoni.

278. **Ficus planicostata latifolia** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 202, pl. 31, fig. 9.

=Ficus latifolia.

50130. **Ficus præcursor** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p.81, pl. 49, fig. 5.

287. **Ficus pseudopopulus** Lesquereux. Types.
288. Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 313; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 204, pl. 34, figs. 1, 2.

634. **Ficus reticulata** (Lesquereux) Knowlton. Types.
635. Dakota (Cret.). Fort Harker, Kansas.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 104.

See Laurophyllum reticulatum and Ficus laurophylla.

6915. **Ficus reticulata** (Lesquereux) Knowlton.
Illustrated specimens.
6918. Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 88, pl. 12, figs. 2, 3.

644. **Ficus? rhomboidea** Lesquereux. Type.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 96.

=Phyllites rhomboideus.

2478. **Ficus shastensis** Lesquereux. Type.
Miocene (Tert.). Shasta County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 28, pl. 11, fig. 3.

4107. **Ficus sinuosa** Ward. Type.
Denver (Cret.). Golden, Colorado.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 41, pl. 22, fig. 2.

106a. **Ficus? smithsoniana** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 200, pl. 32, fig. 5.

See Juglans smithsoniana.

4109. **Ficus speciosissima** Ward. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 39, pl. 21, fig. 3.

285a. **Ficus spectabilis** Lesquereux. Illustrated specimens.
286. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 199, pl. 33, figs. 5, 6.

5347. **Ficus spectabilis** Lesquereux. Illustrated specimen.
Denver? (Cret.). Near Golden, Colorado.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 38, pl. 21, fig. 1.

268. **Ficus subtruncata** Lesquereux. Illustrated specimens.
269. Denver (Cret.). Golden, Colorado.
270.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 205, pl. 30, figs. 7–9.

=Ficus auriculata.

1604. **Ficus tenuinervis** Lesquereux. Type.
Green River (Tert.). Alkali Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 164, pl. 44, fig. 4.

4099. **Ficus tiliæfolia** (Al. Braun) Heer. Illustrated specimen.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 40, pl. 22, fig. 1.

282. **Ficus tiliæfolia** (Al. Braun) Heer. Illustrated specimen.
283. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept, U. S. Geol. Surv. Terr., VII, Pt. II, 1878, 203, pl. 32, figs. 2, 3.

5353. **Ficus trinervis** Knowlton. Types.
5354. Montana (Cret.). Point of Rocks and Black Buttes, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 42.

See Cinnamomum affine.

298 to 300. **Ficus ulmifolia** Lesquereux. Types.
Laramie (Cret.). Fischer's Peak, Raton Mountains, New Mexico.

Lesquereux, Suppl. to Fifth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 14.

=Ficus uncata.

298 to 300. **Ficus uncata** Lesquereux. Types.
Laramie (Cret.). Fischer's Peak, Raton Mountains, New Mexico.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 197, pl. 35, figs. 1, 1a, 2.

See Ficus ulmifolia.

265. **Ficus ungeri** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Suppl. Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1871 [1872], p. 7; Rept. U. S. Geol. Surv. Terr., 1874, p. 195.

1598 to 1600. **Ficus ungeri** Lesquereux. Illustrated specimens.
Green River (Tert.). Alkali Station, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 163, pl. 44, figs. 1–3.

4405. **Ficus ungeri** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Bluff on Yellowstone, one mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 713, pl. 91, fig. 3.

7627. **Ficus ungeri** Lesquereux. Illustrated specimen.
Payette (Miocene). Cartwright's Ranch, on Shafer Creek, Boise County, Idaho.
Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 731, pl. 101, fig. 5.

4100 to 4103. 4153. **Ficus viburnifolia** Ward. Types.
Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 42, pl. 22, figs. 4–8.

3280. **Ficus virginiensis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 295, pl. 143, figs. 1, 3; pl. 144, fig. 1.

289. **Ficus wyomingiana** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 205, pl. 34, fig. 3.

7583. **Ficus** sp. Knowlton.
Miocene (Tert.). Comstock, Douglas County, Oregon.
Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 46, pl. 4, fig. 2.

7593. **Ficus** sp.? Knowlton.
Miocene (Tert.). Five miles north of Ashland, Oregon.
Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 46, pl. 3, fig. 1.

4398. **Ficus** sp. Knowlton.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 713, pl. 89, fig. 3.

50036. 50037. **Ficus** sp. Lesquereux (fruits of).
Dakota (Cret.). Four miles south of Brookville, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 85, pl. 10, figs. 7, 8.

110 to 112. **Flabellaria eocenica** Lesquereux. Illustrated specimens.
Laramie (Cret.). Black Buttes, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 111, pl. 13, figs. 1, 2, 3.

1570. **Flabellaria florissanti** Lesquereux. Types.
1571. Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr. VIII, Pt. III, 1883, p. 144, pl. 24, fig. 1.

601. **Flabellaria? minima** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 56, pl. 30, figs. 12, 12a.

101. **Flabellaria zinkeni?** Heer. Illustrated specimens.
102. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 110, pl. 60, figs. 6–8.

=Geonomites goldianus.

1796. **Fraxinus abbreviata** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr , VIII, Pt. III, 1883, p. 170, pl. 28, fig. 5.

7125. **Fraxinus affinis** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 127, pl. 49, fig. 5.

=Quercus affinis.

333. **Fraxinus denticulata** Heer. Illustrated specimen.
Livingstone (Cret.). Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 228, pl. 40, fig. 2.

1793. **Fraxinus heerii** Lesquereux. Types.
1794. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 169, pl, 33, figs. 5, 6.

3763. **Fraxinus herendeenensis** Knowlton. Type.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 224, pl. 9, fig. 7.

7062. **Fraxinus integrifolia** Newberry. Types.
7090. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 509; Mon. XXXV, U. S. Geol. Surv., 1898, p. 128, pl. 49, figs. 2, 3.

1795. **Fraxinus libbeyi** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 171, pl. 27, fig. 7.

1784 to 1791. **Fraxinus mespilifolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 169, pl. 33, figs. 7–9, 11, 12.

334. **Fraxinus prædicta** Heer. Illustrated specimen.
Green River (Tert.). South Park, near Costello's Ranch, Colorado.
Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 414; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 279, pl. 40, fig. 3.

4358. **Fraxinus wrightii** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, below Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 743, pl. 90, fig. 4.

3750. **Frenelopsis hoheneggeri** (Ettingshausen) Schenk. Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.
Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 275, pl. 43, fig. 4.

3228. **Frenelopsis parceramosa** Fontaine. Type.
Potomac (Low. Cret.). Entrance to Trent's reach, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 218, 219, pl. 111, figs. 1–5; pl. 112, figs. 1–5; pl. 98, fig. 1.

3187. **Frenelopsis ramossisima** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 215–218, pls. 95–99; pl. 100, figs. 1–3; pl. 101, fig. 1.

3749. **Frenelopsis varians** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.
Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 273, pl. 41, figs. 1–3a.

3158. **Fucus lignitum** Lesquereux. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 42, pl. 61, figs. 24, 24a.

4219. **Fucus lignitum** Lesquereux. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 13, pl. 1, fig. 1.

4220. **Fucus lignitum** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Burns's Ranch, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 13, pl. 1, fig. 2.

75 to 78. **Geinitzia biformis** (Lesquereux) Knowlton. Types.
Montana (Cret.). Point of Rocks, Wyoming.
Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 28.
See Sequoia biformis. (Also catalogue numbers 4226, 5368, 5369.)

7662. **Geinitzia formosa** Heer. Illustrated specimens.
7663. Montana (Cret.). Near Harper's Station, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 28, pl. 5, figs. 1, 2.

7375. **Geinitzia jenneyi** Fontaine. Types.
7392. Lakota (Low. Cret.). Cliff north side Pine Creek, two miles
7393. west of Mrs. Dorsett's ranch, Crook County, Wyoming.
7394.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 676, pl. 166, figs. 5–11; pl. 167.

61. **Geinitzia longifolia** (Lesquereux) Knowlton. Types.
73. Montana and Laramie? (Cret.). Greeley, Colorado, and
74. Point of Rocks, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 28.

See Sequoia longifolia.

103. **Geonomites goldianus** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 115, pl. 9, fig. 9.

101. **Geonomites goldianus** Lesquereux. See Flabellaria zinkeni?
102.

104. **Geonomites schimperi** Lesquereux. Type.
Laramie? (Cret.). Yellowstone Lake, Yellowstone National Park.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 116, pl. 10, fig. 10.

105. **Geonomites tenuirachis** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 117, pl. 11, fig. 1.

106. **Geonomites ungeri** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 118, pl. 11, fig. 2.

30794. **Gilbertina spiralis** Ulrich. Types.
30795. Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 141, pl. 18, figs. 1, 2.

4222. **Ginkgo adiantoides** (Unger) Heer. Illustrated specimens.
4223. Fort Union (Tert.). Seven Mile Creek, ten miles below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 15, pl. 1, figs. 5, 6.

8398. **Ginkgo digitata** (Brongniart) Heer. Illustrated specimen.
8406. Jurassic? Corwin coal mine, near Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 170, pl. 44, figs. 5, 6.

8388. (2482.) **Ginkgo huttoni** (Sternberg) Heer. Illustrated specimen.
Neocomian or Jurassic. Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 170.

See Ginkgo multinervis.

8407. 8412. **Ginkgo huttoni magnifolia** Fontaine. Types.
Jurassic? Corwin Creek, east of Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 170, pl. 44, figs. 7, 8.

4221. **Ginkgo laramiensis** Ward. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 15, pl. 1, fig. 4.

8388. (2482.) **Ginkgo multinervis** Heer. Illustrated specimen.
Neocomian or Jurassic. Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 31, pl. 16, fig. 6.

=Ginkgo huttoni.

498. 499. 499a. **Ginkgo** sp. Knowlton.
Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 111.

See Carpites myricarum.

8536. **Ginkgo** sp. Knowlton.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 23, pl. 1, fig. 5.

8418. 8387. (2437.) **Ginkgodium? alaskense** Fontaine. Types.
Jurassic? Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 168, pl. 44, figs. 3, 4.

See Baiera palmata.

2193. **Gleichenia? gilbert-thompsoni** Fontaine. Type.
Shasta (Low. Cret.). Pettyjohn's Ranch, twelve miles west of Red Bluff, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 232, pl. 66, fig. 11.

584. **Gleichenia kurriana** Heer. Illustrated specimen.
Dakota (Cret.). Three miles east of Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 47, pl. 1, fig. 5.

585. **Gleichenia nordenskiöldi** Heer. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., I, 1874 [1876], p. 334, pl. 2, fig. 5; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 26, pl. 1, fig. 1.

3186. **Gleichenia nordenskiöldi?** Heer. Illustrated specimen.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 119, pl. 21, fig. 11.

3992. **Gleichenia nordenskiöldi?** Heer. Illustrated specimen.
3997. Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 231, pl. 65, figs. 26, 27.

See Aspidium heterophyllum.

4002. **Gleichenia nordenskiöldi?** Heer. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 231, pl. 65, fig. 28.

See Pecopteris strictinervis.

31587. **Gleichenia nordenskiöldi?** Heer. Illustrated specimen.
(4004.) Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 231, pl. 65, fig. 29.

See Osmunda dicksonoides.

7686 **Gleichenia? obscura** Knowlton. Types.
to Esmeralda (Neocene). 3.8 kilometers northeast of Emi-
7688. grant Peak, Esmeralda County, Nevada.
7693.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 210, pl. 30, figs. 1–4.

6008. **Gleichenia zippei?** (Corda) Heer. Illustrated specimen.
Red Canyon, west of Minnekahta, Fall River County, South Dakota.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 664, pl. 162, fig. 9.

1359. **Glossopteris ampla** Dana. Type.
Upper Coal Measures (Penn.). Newcastle, Illawarra, New South Wales, Australia.

Dana, Wilkes, U. S. Expl. Exped., X, 1849, p. 717; Atlas, p. 5, pl. 13, figs. 1a, 1b.

1358. **Glossopteris browniana** Brongniart. Illustrated specimens.
Upper Coal Measures (Penn.). Newark and Illawarra, New South Wales, Australia.

Dana, Wilkes, U. S. Expl. Exped., X, 1849, p. 716; Atlas, p. 5, pl. 12, figs. 13, 13a, b, c, 14.

2645. **Glossopteris phillipsii** Brongniart. Illustrated specimens.
2649. Jurassic or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 305, pl. 2, figs. 5, 5b.

3349. **Glossozamites distans** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 176, pl. 68, fig. 5.

6009. **Glossozamites fontaineanus** Ward. Types.
Lakota (Low. Cret.). Red Canyon, west of Minnekahta, Fall River County, South Dakota.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 667, pl. 162, figs. 16–18.

4007. **Glossozamites klipsteini** (Dunker) Fontaine.
Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Sagenopteris mantelli.

3250. **Glyptostrobus brookense** (Fontaine) Ward. Types.
3866. Potomac (Low. Cret.). 72d milepost near Brooke, Vir-
3965. ginia.

Ward, Fifteenth Ann. Rept., U. S. Geol. Surv., 1895, p. 359.

See Taxodium (Glyptostrobus) brookense.

5933a. **Glyptostrobus brookense** (Fontaine) Ward.
7399. Illustrated specimens.
Lakota (Low. Cret.). Cliff on north side Pine Creek, two miles west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 682, pl. 165, fig. 4; pl. 168, fig. 4.

3375. **Glyptostrobus brookense angustifolium** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). White House Bluff, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 112.

See Taxodium (Glyptostrobus) brookense angustifolium.

58. **Glyptostrobus europæus** (Brongniart) Heer.
Illustrated specimen.
Green River (Tert.). Near Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 74, pl. 7, figs. 1, 2.

=Widdringtonia linguæfolia.

6973. **Glyptostrobus europæus** (Brongniart) Heer.
Illustrated specimen.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 24, pl. 26, fig. 8.

6988. **Glyptostrobus europæus** (Brongniart) Heer.
Illustrated specimen.
Fort Union (Tert.). Yellowstone River (Dawson County?), Montana.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 11, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 24, pl. 26, fig. 7.

3270. **Glyptostrobus fastigiatus** (Fontaine) Ward. Types.
3867. Potomac (Low. Cret.). 72d milepost near Brooke; hillside
3868. near Potomac Run, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 380.

See Taxodium (Glyptostrobus) fastigiatum.

595. **Glyptostrobus gracillimus** Lesquereux. Type.
Dakota (Cret.). Mouth of Iowa Creek, near Sioux City, Iowa.

Lesquereux, Amer. Journ. Sci. (2), XLVI, 1868, p. 92; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 52, pl. 1, fig. 11.

= Sequoia gracillima.

7643. **Glyptostrobus** sp. Knowlton. Type.
Montana (Cret.). North Fork Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 31, pl. 5, fig. 4.

24. **Goniopteris polypodioides** Ettingshausen.
25. Illustrated specimens.
Laramie (Cret.). Sand Creek, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 394.

= Dryopteris (Lastrea) polypodioides?
See Lastrea (Goniopteris) polypodioides?

5312. **?Grewia celastroides** Ward. Type.
Fort Union (Tert.). Iron Bluff, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 86, pl. 39, fig. 2.

5308. **Grewia crenata** (Unger) Heer. Illustrated specimen.
Fort Union (Tert.). Bull Mountains, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 85, pl. 39, fig. 1.

7077. **Grewia crenata** (Unger) Heer. Illustrated specimen.
7089. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 120, pl. 18, figs. 2, 3; pl. 46, fig. 2.

5306. **Grewia obovata** Heer. Illustrated specimen.
5311. Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 88, pl. 39, figs. 6, 7.

5307. **?Grewia pealei** Ward. Types.
5309. Fort Union (Tert.). Bull Mountains, Montana.
5310. Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 87, pl. 39, figs. 3–5.

2363. **Grewiopsis acuminata** Lesquereux. Type.
Laramie? (Cret.). "P. Y. Station No. 49, near Messa Station."

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 44, pl. 3, figs. 12, 13; pl. 4, figs. 1, 2.

50127. **Grewiopsis æquidentata** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 180, pl. 58, fig. 4.

409 to 411. 327a. 765. **Grewiopsis eocenica** (Lesquereux) Knowlton. Types.
Laramie (Cret.). Black Buttes, Wyoming.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 114.
See Grewiopsis saportana and Aleurites eocenica

4174. 4175. **Grewiopsis ficifolia** Ward. Type.
Laramie (Cret.). Black Buttes Station, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 92, pl. 41, figs. 1, 2.

740. 741. 6917. **Grewiopsis flabellata** (Lesquereux) Knowlton. See Grewiopsis haydenii and Populites flabellata.

740. 741. 6917. **Grewiopsis haydenii** Lesquereux. Illustrated specimens.
Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 97, pl. 3, figs. 2, 4; pl. 24, fig. 3.
=Grewiopsis flabellata.
See Populites flabellata.

4176. **Grewiopsis platanifolia** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 89, pl. 40, fig. 1.

4171 to 4173. **Grewiopsis populifolia** Ward. Types.
Fort Union (Tert.). Burns's Ranch, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 90, pl. 40, figs. 3–5.

409 to 411. 327a. 765. **Grewiopsis saportana** Lesquereux. Types.
Laramie (Cret.). Black Buttes, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1876. p. 257, pl. 50, figs. 10–12.
= Grewiopsis eocenica.
See Aleurites eocenica.

348. **Grewiopsis tenuifolia** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 258, pl. 40, fig. 14.

4177. **Grewiopsis viburnifolia** Ward. Type.
Fort Union (Tert.). Burns's Ranch, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 89, pl. 40, fig. 2.

2364. **Grewiopsis walcotti** Lesquereux. Type.
Cretaceous? Upper Kanab Valley, Utah.
Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 45, pl. 4, figs. 3, 4.

17. **Gymnogramma gardneri** Lesquereux. Type.
Arapahoe (Cret.). Sand Creek, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 58, pl. 4, fig. 2.

See Pteris gardneri.

29. **Gymnogramma haydenii** Lesquereux. Type.
Laramie (Cret.). Divide between Snake River and southern shores of Yellowstone Lake.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 295; Ann. Rept. U. S. Geol. Surv. Terr., 1874, p. 59, pl. 5, figs. 1–3.

=Anemia perplexa.

30791 to 30793. **Gyrodendron emersoni** Ulrich. Types.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 140, pl. 18, fig. 3; pl. 19, figs. 1, 2.

5405. **Haliserites chondriformis** Penhallow. Type.
Upper Chemung (Dev.). Lanesboro, Susquehanna County, Pennsylvania.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 110, pl. 11, fig. 9.

=Tæniocrada chondriformis.

25164. **Haliserites dechenianus** Goeppert. Illustrated specimen.
Erian (Dev.). Factoryville, Wyoming County, Pennsylvania.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 109, pl. 10, fig. 6.

=Tæniocrada lesquereuxi.

5409. **Haliserites dechenianus lineatus** Penhallow. Type.
Upper Chemung (Dev.). Lanesboro, Susquehanna County, Pennsylvania.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 109, pl. 10, fig. 7.

=Tæniocrada lesquereuxi.

5404. 25091. **Haliserites lineatus** Penhallow. Types.
Upper Chemung (Dev.). Lanesboro, Susquehanna County, and Factoryville, Wyoming County, Pennsylvania.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 110, pl. 10, fig. 8a; pl. 11, fig. 8b.

8329. **Haliserites?** sp. Penhallow.
Erian (Dev.). Skunnemunk Mountain, near Monroe, Orange County, New Jersey.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 107, pl. 9, fig. 4.

15815 to 15817. **Halonia flexuosa** (Goldenberg) Lesquereux.
Illustrated specimens.
Carboniferous. Seneca mine, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 41, figs. 3, 3a; Text, II, 1880, p. 416.

15808. **Halonia mansfieldi** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 12, pl. 67, figs. 2, 2a (as Ulodendron mansfieldi); Text, II, 1880, p. 414.

15811. **Halonia tortuosa** Schimper. Illustrated specimen.
Pennsylvanian. Peoria County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 61, figs. 1, 2; Text, II, 1880, p. 413.

5. **Halymenites major** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 373; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 38, pl. 1, fig. 7.

4. **Halymenites striatus** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 373; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 37, pl. 1, fig. 6.

5329. **Hamamelites fothergilloides** Saporta. Illustrated specimen.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 64, pl. 29, fig. 1.

698. **Hamamelites kansaseana** Lesquereux. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 70, pl. 4, fig. 5.

=Quercus kanseana.

645a. **Hamamelites quadrangularis** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 355; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 70.

See Alnites quadrangularis and Populites quadrangularis.

4131. **Hedera aquamara** Ward. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 59, pl. 26, fig. 7.

=Quercus aquamara.

4133. **Hedera bruneri** Ward. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 58, pl. 26, fig. 6.

50101. **Hedera cretacea** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 127, pl. 18, fig. 1.

50104. **Hedera decurrens** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 130, pl. 18, fig. 6.

1804. **Hedera marginata** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 177, pl. 40, fig. 8.

50102. **Hedera microphylla** Lesquereux. Types.
50103. Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 127, pl. 18, figs. 2, 3.

4132. **Hedera minima** Ward. Type.
Fort Union (Tert.). Head of Clear Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 57, pl. 26, fig. 5.

682. **Hedera ovalis** Lesquereux. Types.
683. Dakota (Cret.). Near Decatur, Nebraska, and Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 91, pl. 25, fig. 3; pl. 26, fig. 4.

4134. **Hedera parvula** Ward. Type.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 57, pl. 26, fig. 4.

685. **Hedera platanoidea** Lesquereux. Illustrated specimens.
686. Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 65, pl. 3, figs. 5, 6.

3360. **Hederæphyllum angulatum** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 324, pl. 162, fig. 1.

3418. **Hederæphyllum crenulatum** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 324, pl. 162, fig. 3.

30798. **Helminthoida abnormis** Ulrich. Type.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 143, pl. 16, fig. 4.

30796. **Helminthoida exacta** Ulrich. Type.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 142, pl. 16, fig. 5.

30797. **Helminthoida subcrassa** Ulrich. Type.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 142, pl. 16, fig. 3.

30799. **Helminthoida vaga** Ulrich. Type.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 143, pl. 17.

30802. **Helminthopsis labyrinthica** Heer. Illustrated specimens.
30803. Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 144, pl. 20, figs. 2, 3.

30800. **Helminthopsis magna** Heer. Illustrated specimens.
30801. Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 144, pl. 21, figs. 1, 2.

567 **Hicoria antiquorum** (Newberry) Knowlton. See Carya antiquorum. (Also catalogue numbers 470–475, 5358.)
568.

4395. **Hicoria crescentia** Knowlton. Type.
Fort Union (Tert.). Northeast side of Crescent Hill, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 691, pl. 84, fig. 7.

4344. **Hicoria culveri** Knowlton. Type.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 691, pl. 83, fig. 7.

1870. **Hicoria juglandiformis** (Sternberg) Knowlton.
Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 117.

See Carya bilinica.

30080. **Hicoria magnifica** Knowlton. Types.
30082. Eocene (Tert.). Kukak Bay, Alaska.
30085.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 152, pl. 26, fig. 1; pl. 27; pl. 29, fig. 1.

8553. **Hicoria** sp.? Knowlton.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 38, pl. 5, fig. 2.

8515. **Hydrangea bendirei** (Ward) Knowlton. Type.
(2541.) Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, pp. 60, 61, pl. 9, fig. 6.

See Marsilea bendirei and Porana bendirei.

2744. **Hymenæa dakotana** Lesquereux. Types.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 145, pl. 55, figs. 2, 3; pl. 56, figs. 1, 2; pl. 57, fig. 2.

3377. **Hymenæa virginiensis** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 320, pl. 163, fig. 6.

19431. **Hymenophyllites strongii** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Rept. Geol. Surv. Ill., IV, 1870, p. 417, pl. 18, fig. 1.

=Rhacophyllum strongii.

14. **Hymenophyllum confusum** Lesquereux.
Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 51, pl. 2, fig. 6.

588. **Hymenophyllum cretaceum** Lesquereux.
Illustrated specimen.
Dakota (Cret.). Eight miles south of Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 45, pl. 29, fig. 6.

37. **Hypnum haydenii** Lesquereux. Type.
Green River (Tert.). South Park, near Costello's Ranch, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 309; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 44, pl. 5, fig. 14.

5418. **Hysterites cordaites** Grand 'Eury. Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 14, pl. 3.

10258. **Idiophyllum rotundifolium** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 5, pl. 23, fig. 11; Text, I, 1880, p. 160.

=Neuropteris rarinervis.

400. **Ilex ? affinis** Lesquereux. Types.
401. Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv., 1871 [1872], p. 8; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 270, pl. 1, figs. 2, 3.

403 to 405. **Ilex dissimilis** Lesquereux. Types.
Green River (Tert.). Sage Creek, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 271, pl. 1, figs. 7–9.

See Quercus ilicoides (?).

1868. **Ilex grandifolia** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 187, pl. 38, fig. 1.

1859 to 1861. **Ilex knightiæfolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 188, pl. 40, figs. 4, 5.

1610. **Ilex maculata** Lesquereux. Type.
Green River (Tert.). Alkali Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 186, pl. 44, fig. 5.

50077. **Ilex masoni** Lesquereux. Type.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 179, pl. 7, fig. 6.

50326 to 50328. **Ilex pseudo-stenophylla** Lesquereux. Types.
Upper Eocene (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 185.

See Ilex stenophylla.

1862 to 1867. **Ilex quercifolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 186, pl. 38, figs. 2–5.

50326 to 50328. **Ilex stenophylla** (Unger) Lesquereux. Supplemental types.
Upper Eocene (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., Suppl. 1871 [1872], p. 8.

=Ilex pseudo-stenophylla.

744. **Ilex strangulata** Lesquereux. Type.
Montana? (Cret.). San Juan River, southwest Colorado.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 399; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 359, pl. 8, fig. 3; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 84, pl. 3, fig. 7.

406. **Ilex subdenticulata** Lesquereux. Type.
Green River (Tert.). Near Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 416; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 271, pl. 50, fig. 6.

399. **Ilex wyomingiana** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 270, pl. 1, fig. 1.

2767. **Inga cretacea** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 153, pl. 55, fig. 11.

599. **Inolepis** sp. Lesquereux.
Dakota (Cret.). Clay County, Kansas.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 392; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 337, pl. 4, fig. 8; Rept. U. S. Geol. Surv. Terr., VIII. Pt. III, 1883, p. 33, pl. 1, fig. 1.

49. **Iris** sp. Newberry.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 7, fig. 6; Mon. XXXV, U. S. Geol. Surv., 1898, p. 33, pl. 22, fig. 6.

8429. **Irites alaskana** Lesquereux. Type.
(2320.) Neocomian or Jurassic? Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 36.

=Nageiopsis longifolia.

3399. **Juglandiphyllum integrifolium** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom, White House bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 315, pl. 157, figs. 3, 5, 6.

50066. **Juglandites lacoei** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 71, pl. 48, fig. 5.

50048. **Juglandites primordialis** Lesquereux. Type.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 70, pl. 35, fig. 15.

50029 to 50031. **Juglandites sinuatus** Lesquereux. Types.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 71, pl. 35, figs. 9–11.

30092. **Juglans acuminata** Al. Braun. Illustrated specimen.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 152, pl. 33, fig. 3.

8486. **Juglans acuminata?** Al. Braun. Illustrated specimen.
Upper Clarno, Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 35, pl. 3, fig. 3.

527 to 529. **Juglans alkalina** Lesquereux. Types.
Green River (Tert.). Alkali Station, above Green River, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 288, pl. 62, figs. 6–8.

50032. **Juglans arctica** Heer. Illustrated specimen.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 68, pl. 39, fig. 5.

8548. **Juglans ? bendirei** Knowlton. Type.
Clarno beds, Eocene (Tert.). Cherry Creek, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 34, pl. 3, fig. 3.

482. **Juglans crossii** Knowlton. Type.
Green River (Tert.). Green River Station, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 122.

See Juglans denticulata.

624a. **Juglans ? debeyana** (Heer) Lesquereux. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.

Lesquereux, Amer. Jour. Sci., XLVI, 1868, p. 101 (as Juglans debeyana).

=Populus ? debeyana.

749. **Juglans ? debeyana** (Heer) Lesquereux.
750. Illustrated specimens.
6901. Dakota (Cret.). Decatur and near Beatrice, Nebraska.
6906.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 110; pl. 23, figs. 1–5.

482. **Juglans denticulata** Heer. Illustrated specimen.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 289, pl. 58, fig. 1.

=Juglans crossii.

8290. **Juglans hesperia** Knowlton. Type.
Payette (Miocene). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 723, pl. 99, fig. 8.

=Juglans oregoniana.

4325. **Juglans laurifolia** Knowlton. Types.
5127. Fort Union (Tert.). Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 688, pl. 83, figs. 2, 3.

453. **Juglans leconteana** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 285, pl. 54, fig. 13.

7117. **Juglans nigella** Heer. Illustrated specimen.
Eocene (Tert.). Cooks Inlet, Alaska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 33, pl. 51. fig. 4.

5359. **?Juglans nigella** Heer. Illustrated specimen.
Fort Union (Tert.). Burns's Ranch, twenty-eight miles below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 33, pl. 15, fig. 1.

7027 to 7033. **Juglans occidentalis** Newberry. Types.
Green River (Tert.). Green River, Wyoming.
Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 507; Mon. XXXV, U. S. Geol. Surv., 1898, p. 34, pl. 66, figs. 1–4, 4a–c.

8290. **Juglans oregoniana** Lesquereux. Illustrated specimen.
Payette (Miocene). Two miles southeast of Marsh, Boise County, Idaho.
Knowlton, Bull. No. 204, U. S. Geo. Surv., 1902, p. 37.
See Juglans hesperia.

33654. (2582.) **Juglans oregoniana** Lesquereux. Supplemental type.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 37.
See Rhus bendirei (part).

4325. 4488. **Juglans remotidens** Knowlton. Types.
Miocene (Tert.). Hill above Yancey's, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 688, pl. 83, figs. 2, 3.

316a. **Juglans rhamnoides** Lesquereux. Type.
Laramie? (Cret.). Evanston, Wyoming.
Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 294.

449. 451. 452. **Juglans rhamnoides** Lesquereux. Illustrated specimens.
Laramie (Cret.). Black Buttes, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 284, pl. 54, figs. 6–9.

450. **Juglans rhamnoides** Lesquereux. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 124.
See Rhamnus rossmässleri.

454. to 461. 463. 851. **Juglans rugosa** Lesquereux. Types.
Laramie (Cret.). Black Buttes, Wyoming.
Montana (Cret.). Point of Rocks, Wyoming.
Laramie? (Cret.). Evanston, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 286, pl. 54, fig. 14; pl. 55, figs. 2–9; pl. 56, figs. 1, 2.

361a. 465 to 469. **Juglans schimperi** Lesquereux. Types.
Green River (Tert.). Green River Station, Wyoming.
Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., Suppl., 1871 [1872], p. 8; Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], pp. 382, 384; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 287, pl. 56, figs. 5–10.

106a. **Juglans smithsoniana** Lesquereux. Type.
Laramie (Cret.) Raton Mountains, New Mexico.
Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., Suppl., 1871 [1872], p. 16.
=Ficus? smithsoniana.

464. **Juglans thermalis** Lesquereux. Type.
Denver (Cret.). Hot Springs, Middle Park, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., Suppl., 1871 [1872], p. 17; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 287, pl. 56, fig. 3.

464a. **Juglans thermalis** Lesquereux. Illustrated specimen.
Denver (Cret.). Hot Springs, Middle Park, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 287, pl. 56, fig. 4.

5360. **?Juglans ungeri** Heer. Illustrated specimen.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 33, pl. 14, fig. 6.

7589. **Juglans** sp. Knowlton. Type.
Miocene (Tert.). Comstock, Douglas County, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 39, pl. 1, fig. 5.

15800 to 15802. **Knorria compacta** Lesquereux. Types.
Pennsylvanian. Thayer, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 839, 840.

8205. **Laccopteris lanceolata** (Goeppert) Presl. Illustrated specimen.
Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 281, pl. 38, figs. 2–4.

See Neuropteris sp. and Pecopteris sp.

3421. 3962. **Laricopsis angustifolia** Fontaine. Types.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 233, pl. 102, figs. 9, 10; pl. 103, figs. 1, 4.

3358. **Laricopsis brevifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 234, pl. 102, figs. 5, 6.

3323. 3847. **Laricopsis longifolia** Fontaine. Types.
Potomac (Low. Cret.). Fredericksburg and fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 233, pl. 102; figs. 7, 8; pl. 103, figs. 2, 3; pl. 167, fig. 4; pl. 168, figs. 5, 6.

3744. **Laricopsis longifolia** Fontaine. Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 268, pl. 36, fig. 9.

12. **Lastrea arguta** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesqueaeux, Amer. Journ. Sci. LXV, 1868, p. 207.

=Dryopteris arguta.

7097. **Lastrea (Goniopteris) fischeri** Heer. Illustrated specimen.
Lower Clarno, Eocene (Tert.). Currant Creek, Oregon.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 10, pl. 48, fig. 6.
See Lastrea (Goniopteris) knightiana.

7573. **Lastrea (Goniopteris) fischeri** Heer. Illustrated specimen.
Miocene (Tert.). Five miles north of Ashland, Oregon.
Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 38, pl. 1, fig. 24.

26. **Lastrea (Goniopteris) goldiana** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 56, pl. 4, fig. 13.
See Aspidium goldianum.

27. **Lastrea (Goniopteris) intermedia** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 56, pl. 4. fig. 14.

7097. **Lastrea (Goniopteris) knightiana** Newberry. Type.
Lower Clarno, Eocene (Tert.). Currant Creek, Oregon.
Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 503.
= Lastrea (Goniopteris) fischeri.

24. **Lastrea (Goniopteris) polypodioides?** Ettingshausen.
25. Illustrated specimens.
Arapahoe (Cret.). Sand Creek, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 57, pl. 4, figs. 11, 12.
= Dryopteris (Lastrea) polypodioides.
See Goniopteris polypodioides.

3655. **Laurinoxylon branneri** Knowlton. Types.
3656. Orange sand (Tert.). Bolivar Creek, Poinsett County, and Big and Little Crow Creek, St. Francis County, Arkansas.
Knowlton, Ann. Rept. Geol. Surv. Ark. for 1889, II, (1891), p. 256, pl. 9, figs. 8, 9; pl. 10, figs. 1, 2; pl. 11, fig. 4.

3657. **Laurinoxylon lesquereuxiana** Knowlton. Type.
Orange sand (Tert.). Near Wittsburg, Cross County, Arkansas.
Knowlton, Ann. Rept. Geol. Surv. Ark. for 1889, II, (1891), p. 258, pl. 10, figs. 3, 4; pl. 11, figs. 3, 4.

50136. **Laurophyllum ellsworthianum** Lesquereux. Illustrated specimen.
Dakota (Cret.) Pipe Creek, Cloud County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 95, pl. 13, fig. 7.
= Quercus ellsworthianus.

634. **Laurophyllum reticulatum** Lesquereux. Types.
635 Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 76, pl. 15, figs. 4, 5.

=Ficus reticulata.
See Ficus laurophyllum.

50144. **Laurus antecedens** Lesquereux. Type.
Dakota (Cret.). Four miles southwest of Brookville, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 92, pl. 11, fig. 3.

309. **Laurus brossiana** Lesquereux. Illustrated specimen.
Denver (Cret.). Mount Bross, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 216, pl. 36, fig. 9.

2496. **Laurus californica** Lesquereux. Illustrated specimen.
Miocene (Tert.). Boaz Station, Graves County, Kentucky.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 12, pl. 4, fig. 1.

4384. **Laurus grandis** Lesquereux. Illustrated specimens.
5176. Fort Union (Tert.). Specimen Ridge, Fossil Forest, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 725, pl. 93, fig. 3; pl. 95, fig. 1.

2713. **Laurus knowltoni** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv. 1891, p. 94, pl. 50, fig. 4.

7130. **Laurus macrocarpus** Lesquereux. Type.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 98; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 74, pl. 10, fig. 2.

4394. **Laurus montana** Knowlton. Type.
5186. Fort Union (Tert.). Yellowstone River, half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 724, pl. 95, fig. 2.

639. **Laurus nebrascensis** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Jour. Sci., XLVI, 1868, p. 98; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 74, pl. 28, fig. 14.

See Persea nebrascensis.

905. **Laurus ocoteoides** Lesquereux. Type.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 215, pl. 36, fig. 10.

=Laurus wardiana.

4404. **Laurus perdita** Knowlton. Types.
4478. Miocene (Tert.). Hill above Yancey's and near standing
5093. fossil trees, Yellowstone National Park.
5220. Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 723,
5222. pl. 94, figs. 1–5.

2711. **Laurus plutonia** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 91, pl. 22, fig. 5.

50009. **Laurus plutonia** Heer. Illustrated specimens.
50010. Dakota (Cret.). Pipe Creek, Cloud County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 91, pl. 13, figs. 5, 6.

311. **Laurus præstans** Lesquereux. Type.
Montana (Cret.). Point of Rocks, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 215, pl. 63, fig. 7.

7651. **Laurus præstans** Lesquereux. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.
Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 59, pl. 16, fig. 2.

4323. **Laurus primigenia?** Unger. Illustrated specimens.
5069. Fort Union (Tert.). Foot of bluff, Yellowstone River, half a mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 722, pl. 91, figs. 4, 5.

5351. **Laurus primigenia** Unger. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 47, pl. 23, fig. 10.

5352. **Laurus primigenia** Unger. Illustrated specimen.
Laramie? (Cret.). Carbon Station, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 47, pl. 23, fig. 8.

4324. **Laurus princeps** Heer. Illustrated specimen.
Fort Union (Tert.). Foot of bluff, Yellowstone River, half mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 725, pl. 95, fig. 3.

636. **Laurus proteæfolia** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 393; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 342, pl. 5, fig. 1; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 52, pl. 3, fig. 9.

5348. **Laurus resurgens** Saporta. Illustrated specimen.
Fort Union (Tert.). Bull Mountains, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 47, pl. 23, fig. 7.

304. **Laurus sessiliflora** Lesquereux. Type.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 407.

=Malapoenna sessiliflora.
See Tetranthera sessiliflora.

7584 to 7586b. **Laurus similis** Knowlton. Types.
Miocene (Tert.). Comstock, Douglas County, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 48, pl. 5, figs. 1–4.

306 to 308. **Laurus socialis** Lesquereux. Types.
Laramie ? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 213, pl. 36, figs. 1, 4.

310. **Laurus utahensis** Lesquereux. Type.
Laramie (Cret.). Bridgers Pass, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 216, pl. 36, fig. 11.

905. **Laurus wardiana** Knowlton. Type.
Laramie (Cret.). Golden, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 129.

See Laurus ocoteoides.

491. **Leguminosites ? arachioides** Lesquereux. Types.
492. Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 301, pl. 59, figs. 14, 14a.

See Carpolithes arachioides.

5370. **Leguminosites arachioides** Lesquereux.
Illustrated specimen.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 65, pl. 29, fig. 2.

484. **Leguminosites cassioides** Lesquereux. Type.
Laramie (Cret.). Spring (Rocky) Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 300, pl. 59, fig. 4.

=Leguminosites lesquereuxiana.

3097. **Leguminosites convolutus** Lesquereux.
Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 151, pl. 44, fig. 1.

50060. **Leguminosites coronillioides?** Heer. Illustrated specimens.
Dakota (Cret.). Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 149, pl. 13, fig. 10.

4391. **Leguminosites lamarensis** Knowlton. Type.
Miocene (Tert.). East bank Lamar River between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 731, pl. 89, figs. 5, 6.

484. **Leguminosites lesquereuxiana** Knowlton. Type.
Laramie (Cret.) Spring (Rocky) Canyon, near Fort Ellis, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 131.

See Leguminosites cassioides.

704. **Leguminosites marcouanus** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 5, fig. 2.

=Phyllites obcordatus.

50059. **Leguminosites podogonialis** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 148, pl. 13, fig. 11.

50058. **Leguminosites truncatus** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 150, pl. 21, fig. 7.

1628. **Lemna penicillata** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 143, pl. 23, fig. 8.

5364. **Lemna scutata** Dawson. Illustrated specimen.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 17, pl. 3, fig. 4.

540. **Lemna scutata** Dawson. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 102, pl. 61, fig. 2.

=Nelumbo intermedia.

8248. **Lepacyclotes circularis** Emmons. Type.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties of North Carolina, 1856, p. 332, pl. 3, fig. 4; Amer. Geology, VI, 1857, p. 130, pl. 3, fig. 4.—Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 311, pl. 47, fig. 4.

8249 to 8252. **Lepacyclotes ellipticus** Emmons. Illustrated specimens
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 311, pl. 47, fig. 5; pl. 48.

25255. **Lepidocystis angularis** Lesquereux. Types.
25256. Pennsylvanian. Port Griffith Railroad cut, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 456, pl. 69, fig. 17.

=Plinthiotheca angularis.

25165. **Lepidocystis fraxiniformis** (Goeppert) Lesquereux.
25166. Illustrated specimens.
Pottsville (Penn.). Near Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 13, pl. 69, figs. 22, 23; Text, II, 1880, p. 457.

6055. **Lepidocystis jenneyi** David White. Type.
Cherokee, Des Moines (Penn.). Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 215, pl. 59, fig. 3.

25254. **Lepidocystis lineatus** Lesquereux. Type.
Pocono (Miss.). Port Carbon, Schuylkill County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 13, pl. 69, fig. 4; Text, II, 1880, pp. 454, 455.

6089. **Lepidocystis missouriensis** David White. Types.
6090. Cherokee, Des Moines (Penn.). Gilkersons Ford, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 217, pl. 61, fig. 1b; pl. 62, figs. b, c, d, e; pl. 63, figs. 3, 3a; pl. 73, fig. 2.

25246. **Lepidocystis obtusus** Lesquereux. Type.
Anthracite series (Penn.). Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 13, pl. 69, figs. 6, 7; Text, II, 1880, p. 455.

25252. **Lepidocystis pectinatus** Lesquereux. Type.
Anthracite series (Penn.). Pittston, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 454, pl. 69, fig. 3.

25288. **Lepidocystis truncatus** (Lesquereux) David White. Type.
Pottsville (Penn.). Campbells Ledge, Pittston, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 457, pl. 69, fig. 20.

15430. **Lepidodendron andrewsii** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 12, pl. 64, fig. 6; Text, II, 1880, p. 389.

15482. **Lepidodendron brittsii** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 368, pl. 63, figs. 1, 2.

5640. **Lepidodendron brittsii** Lesquereux. Illustrated specimens.
6039. Cherokee, Des Moines (Penn.). Deepwater and Clinton,
6040. Henry County, Missouri.
6042. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 188, pl. 52, figs.
15488. 1, 2, 3; pl. 53, fig. 1; pl. 54, figs. 1, 2.

6680. **Lepidodendron choctavense** David White. Type.
6752. McAlester (Penn.). Railroad cut, one-half mile south of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 528, pl. 68, figs. 14, 14a.

15437. **Lepidodendron cuspidatum** Lesquereux. Type.
Anthracite series (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Serv. Pa., Rept. Prog. P, Atlas, 1879, p. 12, pl. 64, fig. 7; Text, II, 1880, p. 388.

15501. **Lepidodendron cyclostigma** Lesquereux. Types.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 62, fig. 5; Text, II, 1880, p. 394.

=Omphalophloios cyclostigma.

8794. **Lepidodendron lanceolatum** Lesquereux.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 192, pl. 53, fig. 2.

15460. **Lepidodendron lanceolatum** Lesquereux.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine?, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 194.

See Lepidodendron marginatum.

15460. **Lepidodendron marginatum** (Presl) Lesquereux.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine?, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 784, pl. 107, fig. 3.

=Lepidodendron lanceolatum.

15515 **Lepidodendron rigidum** Lesquereux. Types.
to Pottsville (Penn.). Dade County, Georgia.
15517. Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 839.

6043. **Lepidodendron rimosum retocorticatum** David White.
15280. Types.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, and Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 196, pl. 54, figs. 3, 4.

1491. **Lepidodendron scobiniforme** Meek. Type.
Pocono (Miss.). Lewis Tunnel, West Virginia.

Meek, Bull. Phil. Soc. Washington, II, 1875–1880, Appendix, p. 38, pl. 2, figs. 1, 1a.

15448. **Lepidodendron scutatum** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 63, figs. 6–6c; Text, II, 1880, pp. 369, 370.

6044 to 6046. 6074. **Lepidodendron scutatum** Lesquereux. Illustrated specimens.
Cherokee, Des Moines (Penn.). Owens and Pitcher's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 198, pl. 45, fig. 4; pl. 54, fig. 5; pl. 55; pl. 72, fig. 4.

15941 to 15946. **Lepidophloios dilatatus** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.
Cherokee, Des Moines (Penn.). Clinton, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 781, pl. 105, figs. 1–4.

15944=Lepidophloios van ingeni.

15974. **Lepidophloios icthyoderma** Lesquereux. Type.
Allegheny (Penn.). Morris, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 13, pl. 68, fig. 10; Text, II, 1880, p. 426.

6047 to 6053. 6061. 6075. 6092. **Lepidophloios van ingeni** David White. Types.
Cherokee, Des Moines (Penn.). Gilkerson's Ford, Clinton, and Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 205, pl. 56, figs. 1–8; pl. 57; pl. 58, fig. 1?; pl. 61, fig. 1c; pl. 62, fig. f; pl. 63, fig. f.

15944. 15947. See Lepidophloios dilatatus (part).

15885. **Lepidophyllum acuminatum** Lesquereux.
Illustrated specimen.
Pennsylvanian. Grape Creek, near Danville, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 14, pl. 69, fig. 37; Text, II, 1880, p. 450.

16240. **Lepidophyllum affine** Lesquereux. Type.
Anthracite series (Penn.). Yatesville, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 69, fig. 31; Text, II, 1880, p. 447.

6491. 6492. 6498. 6501. **Lepidophyllum brevifolium** Lesquereux.
Illustrated specimens.
McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 529, pl, 68, figs. 15–18.

16376 to 16380. **Lepidophyllum campbellianum** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 786, pl. 107, figs. 6, 7.

15908. **Lepidophyllum coriaceum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 787, pl. 107, fig. 10.

16087. 16088. **Lepidophyllum cultriforme** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 785, pl. 107, fig. 13?; pl. 108, fig. 2.

16230. 16231. **Lepidophyllum elegans** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 787, pl. 107, fig. 11.

15896. to 15898. **Lepidophyllum fallax** Lesquereux. Types.
Pennsylvanian. Rhode Island.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 786, pl. 107, figs. 4, 5.

16245. **Lepidophyllum gracile** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 786, p. 107, fig. 8.

6078. 6083. 6084. 6176. **Lepidophyllum jenneyi** David White. Types.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 214, pl. 59, figs. 1, 2; pl. 63, fig. 6.

16066 to 16068. **Lepidophyllum linearifolium** Lesquereux. Types.
Pottsville (Penn.). Boston mine, Pittston, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P Atlas, 1879, pl. 69, fig. 39, Text, II, 1880, p. 452.

15918. **Lepidophyllum mansfieldi** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 14, pl. 69, fig. 34; Text, II, 1880, p. 449.

16243. **Lepidophyllum minutum** Lesquereux. Type.
Anthracite series (Penn.). Archbald, Lackawanna County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 787, pl. 107, fig. 9.

6059. **Lepidophyllum missouriensis** David White. Types.
6062. Cherokee, Des Moines (Penn.). Gilkerson's Ford, Henry
6091. County, Missouri.
6107. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 216, pl. 58, fig.
6235. 2; pl. 60, figs. 2, 3; pl. 61, fig. 1a; pl. 62, fig. a.

15916. **Lepidophyllum morrisianum** Lesquereux. Types.
15917. Allegheny (Penn.). Morris, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 14, pl. 69, figs. 40, 41; Text, II, 1880, p. 448.

16323. **Lepidophyllum ovatifolium** Lesquereux. Type.
16324. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 14, pl. 69, fig. 32; Text, II, 1880, p. 438 (as Lepidostrobus ovatifolius).

16221 **Lepidophyllum stantoni** Lesquereux. Types.
to Anthracite series (Penn.). Stanton Mine, Wilkesbarre,
16223. Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 841.

15985. **Lepidophyllum truncatum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Beaver County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept, Prog. P, Text, II, 1880, p. 458, pl. 69, fig. 9.

16218. **Lepidophyllum tumidum** Lesquereux. Type.
Anthracite series (Penn.). Wilkesbarre, Luzerne County, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I and II, 1880, p. 448; III, 1884, p. 788, pl. 107, fig. 12.

16178. **Lepidostrobus hastatus** Lesquereux. Type.
Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 69, fig. 27; Text, II, 1880, pp. 438, 439.

16145. **Lepidostrobus latus** Lesquereux. Types.
16146. Anthracite series (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 841.

8796. **Lepidostrobus missouriensis** David White. Type.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 217, pl. 60, fig. 1.

6066. **Lepidostrobus princeps** Lesquereux. Illustrated specimens.
6071. Cherokee, Des Moines (Penn.). Gilkerson's Ford, Henry
6088. County, Missouri.
6098. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 212, pl. 62, fig. h; pl. 63, figs. 1, 2; pl. 64, fig. a.

16059. **Lepidostrobus spectabilis** Lesquereux. Types.
16060. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept Prog. P, Text, II, 1880, p. 435.

16131. **Lepidostrobus truncatus** Lesquereux. Type.
16132. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 784, pl. 108, fig. 1.

19156. **Lepidoxylon anomalum** (Brongniart) Lesquereux. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Proc. Amer. Philos. Soc., XVII, 1878, p. 334; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 84, figs. 1, 1a–d; Text, II, 1880, p. 557.

7391. **Leptostrobus ? alatus** Ward. Type.
Lakota (Low. Cret.). Cliff on north side Pine Creek, two miles west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 673, pl. 163, figs. 16, 17.

3457. **Leptostrobus foliosus** Fontaine. Types.
3846. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal and in banks of canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 230, pl. 101, fig. 4; pl. 103, fig. 5; pl. 104, fig. 1.

3238. **Leptostrobus longifolius** Fontaine. Types.
3841 to 3843. 3929. Potomac (Low. Cret.) Fishing hut above Dutch Gap Canal; Fredericksburg; 72d milepost near Brooke; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 228–230, pl. 101, figs. 2, 3; pl. 102, figs. 1–4; pl. 103, figs. 6–12; pl. 104, fig. 6.

5927. **Leptostrobus longifolius** Fontaine. Illustrated specimens.
7398. Lakota (Low. Cret.). Cliff on north side Pine Creek, two miles west of Mrs. Dorsett's ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 671, pl. 162, fig. 15; pl. 165, fig. 3.

3425. **Leptostrobus ? multiflorus** Fontaine. Type.
Potomac (Low. Cret.). 72d. milepost near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 230, pl. 165, fig. 6.

13599. **Lescuropteris moorii** (Lesquereux) Schimper. Supplemental type.
Monongahela (Penn.). St. Clairsville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 162.

11744. **Lesleya microphylla** Lesquereux. Type.
Severy (Penn.). Osage, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 831.

=Neuropteris scheuchzeri.

50049. **Lindera masoni** Lesquereux. Types.
50150. Dakota (Cret.). Four miles southwest of Brookville, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 96, pl. 18, figs. 9, 10.

2697. **Lindera venusta** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 95, pl. 16, figs. 1, 2.

5485. **Linopteris gilkersonensis** David White. Type.
Cherokee, Des Moines (Penn.). Gilkerson's Ford, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 139, pl. 41, figs. 7, 8; Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 510 (as Dictyopteris gilkersonensis).

1576. **Liquidambar europæum** Al. Braun. Illustrated specimen.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 159, pl. 32, fig. 1.

7094 to 7096. **Liquidamber europæum** Al. Braun. Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 100, pl. 47, figs. 1–3.

8544. **Liquidamber europæum patulum** Knowlton. Type.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 62, pl. 10, fig. 5.

330. **Liquidamber gracile** Lesquereux. Type.
Green River (Tert.). Washakie Station, near Bridger's Pass, Carbon County, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv., 1871 [1872], p. 287.

=Aralia? gracilis.

657 to 661. **Liquidambar integrifolium** Lesquereux. Types.
Dakota (Cret.). Eight miles above Salina, Kansas.

Lesquereux, Amer. Jour. Sci., XLVI, 1868, p. 93; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 56, pl. 2, figs. 1–3; pl. 24, fig. 2; pl. 29, fig. 8.

=Liquidamber obtusilobatus.

6912. **Liquidamber obtusilobatus** (Heer) Hollick. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 101, pl. 12, fig. 4.

657 to 661. **Liquidamber obtusilobatus** (Heer) Hollick. See Liquidamber integrifolium.

8534. **Liquidamber pachyphyllum** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 63, pl. 9, fig. 1.

2504. **Liquidambar protensum** Unger. Illustrated specimen.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 13, pl. 8, fig. 3.

8545. **Liquidamber** sp. Knowlton.
Mascall beds, Miocene (Tert.). South Fork of John Day River, about twelve miles west of Mount Vernon, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 63, pl. 12, fig. 4.

708a. **Liriodendron giganteum** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 93, pl. 22, fig. 2.

6898. **Liriodendron intermedium** Lesquereux. Type.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.
Lesquereux, Rept. U. S. Geol. Surv., VI, Pt. I, 1874, p. 93, pl. 20, fig. 5.

5330. **Liriodendron laramiense** Ward. Type.
Montana (Cret.). Point of Rocks, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 102, pl. 48, fig. 2.

707. **Liriodendron meekii** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.
Newberry, Proc. Acad. Nat. Sci. Phila., 1858, p. 265; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 6, fig. 6; Mon. XXXV, U. S. Geol. Surv., 1898, p. 95, pl. 6, fig. 6.

706. **Liriodendron primævum** Newberry. Type.
Dakota (Cret.). Blackbird Hill, Nebraska.
Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 12; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 6, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 96, pl. 6, fig. 7.

2689. 50131. 50132. **Liriodendron primævum** Newberry. Illustrated specimens.
Dakota (Cret.). Ellsworth and Cloud counties, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 203, pl. 26, figs. 1–4.

50133. **Liriodendron semialatum** Lesquereux. Illustrated specimen.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 204, pl. 29, fig. 3.

2753. **Liriodendron snowii** Lesquereux. Type.
50134. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 209, pl. 29, figs. 1, 2.

5349. **Litsea carbonensis** Ward. Type.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 48, pl. 24, fig. 1.

=Malapoenna carbonensis.

50142. **Litsea cretacea** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 96, pl. 15, fig. 2.

=Malapoenna cretacea.

4354. **Litsea cuneata** Knowlton. Types.
4372. Fort Union (Tert.). Yellowstone River, one mile below
5132. mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 727, pl. 92, figs. 2–4.

305. **Litsea weediana** Knowlton. Type.
Livingston (Cret.). Bozeman Coal Field, Montana.

Knowlton, Bull. No. 105, U. S. Geol. Surv., 1893, p. 55.

=Malapoenna weediana.

1744. **Lomatia acutiloba** Lesquereux. Types.
1745. Green River (Tert.). Florissant, Colorado.
1747.
1748. Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 167, pl. 43, figs. 13–16.

662 **Lomatia? saportanea** Lesquereux. Types.
to Dakota (Cret.). Southern Kansas.
664.

Lesquereux, Rept. U. S. Geol Surv. Terr., VIII, Pt. III, 1883, p. 51.

See Todia? saportanea.

1779. **Lomatia spinosa** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 166, pl. 43, fig. 1.

1769 **Lomatia terminalis** Lesquereux. Types.
to Green River (Tert.). Florissant, Colorado.
1773.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 166, pl. 43, figs. 2, 4–7.

1749. **Lomatia tripartita** Lesquereux. Types.
1775. Green River (Tert.). Florissant, Colorado.
1777.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 166, pl. 43, figs. 8–10.

8209. **Lonchopteris oblonga** (Emmons) Fontaine. Type.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 103, pl. 49, fig. 1.

See Acrostichites oblongus.

8210 to 8212. **Lonchopteris oblonga** (Emmons) Fontaine. Illustrated specimens.
Triassic. Ellington's, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 285, pl. 38, figs. 8–10.

3489. 30960 to 30964. **Lonchopteris virginiensis** Fontaine. Types.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 53, pl. 28, figs. 1, 2; pl. 29, figs. 1–4.

15559. **Lycopodites arborescens** Lesquereux. Type.
Morrow, Pottsville (Penn.). Privett's coal bank, Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 778, pl. 106, fig. 1.

=Bothrodendron arborescens.

15552. **Lycopodites simplex** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text III, 1884, p. 779, pl. 106, fig. 2.

91. **Lycopodium lesquereuxiana** Knowlton. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Knowlton, Bull. Geol. Soc. Amer., VIII, 1897, p. 154; Bull. No. 163, U. S. Geol. Surv., 1900, p. 24.

See Selaginella falcata.

36. **Lycopodium prominens** Lesquereux. Type.
Green River (Tert.). Near Elko Station, Nevada.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 409; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 45, pl. 5, fig. 13.

118. **Lygodium compactum** Lesquereux. Type.
Laramie (Cret.). Marshall's Mine, Colorado.

Lesquereux, Amer. Journ. Sci. (2), XVI, 1868, p. 206; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 64, pl. 5, fig. 9.

4283. 4285. 4286. **Lygodium kaulfusii** Heer. Illustrated specimens.
Miocene (Tert.). North bank of Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 672, pl. 80, figs. 1–3.

30 to 34. **Lygodium kaulfusii** Heer. Illustrated specimens.
Laramie? (Cret.). Barrell Springs, Wyoming.
Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898. p. 137.

See Lygodium neuropteroides.

7009 to 7012. **Lygodium kaulfusii** Heer. Illustrated specimen.
Green River (Tert.). Green River, Sweetwater County, Wyoming.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 1, pl. 62, figs. 1–4.

30 to 34. **Lygodium neuropteroides** Lesquereux. Types.
Laramie? (Cret.). Barrel Springs, Wyoming.
Lesquereux, Ann. Rept. U. S. Geol. Surv. 1870 [1871], p. 384; 1871 [1872], p. 284; Rept. U. S. Geol. Surv., VII, Pt. II, 1898, p. 61, pl. 5, figs. 4–7; pl. 6, fig. 1.
=Lygodium kaulfusii Heer.

586. **Lygodium trichomanoides** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 45, pl. 1, fig. 2.

1802. **Macreightia crassa** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 175, pl. 34, figs. 16, 17.

18312. **Macrostachya aperta** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Beaver County, Pennsylvania.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 829, pl. 3, fig. 20.

10964. 17740. 17741. 17742. **Macrostachya communis** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Beaver County, Pennsylvania.
Anthracite series (Penn.). Olyphant, Lackawanna County, Pennsylvania.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 828, pl. 3, fig. 17.

17729. 17730. **Macrostachya infundibuliformis** Schimper. Illustrated specimen.
Allegheny (Penn.). Cannelton, Beaver County, Pennsylvania.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 3, fig. 14; Text, I, 1880, pp. 60–62.

18314. **Macrostachya lanceolata** Lesquereux. Type.
Pottsville (Penn.). Railroad cut above West Pittston, Luzerne County, Pennsylvania.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept, Prog. P, Text, III, 1884, p. 721.

18301. **Macrostachya minor** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 829, pl. 3, fig. 19.

30885. **Macrotæniopteris crassinervis** Feistmantel. Illustrated specimen.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 22, pl. 6, fig. 1.

30886 to 30888. 30979. **Macrotæniopteris magnifolia** (Rogers) Schimper. Illustrated specimens.
Triassic. Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 18, pl. 2, fig.3; pl. 3, fig. 2; pl. 4, fig 2; pl. 5, fig. 2.

50011. **Magnolia alternans** Heer. Illustrated specimen.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 201, pl. 34, fig. 11.

50003. **Magnolia amplifolia** Heer. Illustrated specimen.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 200, pl. 24, fig. 3.

50033. **Magnolia boulayana** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 202, pl. 60, fig. 2.

50064. **Magnolia capellini** Heer. Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 203, pl. 66, fig. 1.

4401. **Magnolia culveri** Knowlton. Type.
Miocene (Tert.). East bank of Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 720, pl. 92, fig. 5.

7004. **Magnolia elliptica** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 94, pl. 12, fig. 1.

365. **Magnolia hilgardiana** Lesquereux. Illustrated specimen.
Laramie (Cret.). Fishers Peak, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 249, pl. 44, fig. 4.

50034. **Magnolia lacoeana** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 201, pl. 60, fig. 1.

364. **Magnolia lesleyana** Lesquereux. Type.
Laramie (Cret.). Fishers Peak, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 248, pl. 44, fig. 1.

4481. **Magnolia microphylla** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, bed No. 3, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 720.

6893. **Magnolia obovata** Newberry. Type.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 2, fig. 2.

=Nyssa vetusta.

2786. **Magnolia obtusata** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 201, pl. 60, figs. 5, 6.

5122. **Magnolia? pollardi** Knowlton. Types.
5123. Fort Union (Tert.). Signal Hill, near Yancey's, Fossil Forest Ridge, and Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 721, pl. 81, figs. 9, 10.

50062. **Magnolia pseudoacuminata** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 199, pl. 24, fig. 2.

5374. **Magnolia pulchra** Ward. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 103, pl. 48, figs. 3, 4.

6959. **Magnolia rotundifolia** Newberry. Type.
Laramie (Cret.). Placer Mountain or Fishers Peak, Colorado.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 573; Mon. XXXV, U. S. Geol. Surv., 1898, p. 95, pl. 59, fig. 1.

50035. **Magnolia speciosa** Heer. Illustrated specimens.
50138. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 202, pl. 60, figs. 3, 4.

4470. **Magnolia spectabilis** Knowlton. Types.
4471. Miocene (Tert.). Fossil Forest Ridge, Yellowstone Na-
4473. tional Park.
4475. Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 718,
4491. pl. 93, figs. 1, 2.

366. **Magnolia tenuinervis** Lesquereux. Illustrated specimens.
to Laramie (Cret.). Black Buttes, Wyoming.
369. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 248, pl. 45, figs. 1–4.

5349. **Malapoenna carbonensis** (Ward) Knowlton. Type.
Laramie? (Cret.). Carbon Station, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 142.

See Litsea carbonensis.

50142. **Malapoenna cretacea** (Lesquereux) Knowlton. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 142.

See Litsea cretacea.

4355. **Malapoenna lamarensis** Knowlton. Types.
4356. Fort Union (Tert.). Top of bluff below mouth of Elk
4492. Creek on Yellowstone, and Lamar River, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 727, pl. 93, figs. 4, 5.

304. **Malapoenna sessiliflora** (Lesquereux) Knowlton. Type.
Laramie? (Cret.). Evanston, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 142.

See Laurus sessiliflora and Tetranthera sessiliflora.

305. **Malapoenna weediana** Knowlton. Type.
Livingston (Cret.). Bozeman Coal Field, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 142.

See Tetranthera sessiliflora and Litsea weediana.

7016. **Manicaria haydenii** Newberry. Type.
Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 504; Mon. XXXV, U. S. Geol. Surv., 1898, p. 31, pl. 64, fig. 3.

6514. **Mariopteris capitata** David White. Type.
McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 482.

See Mariopteris (Pseudopecopteris) decipiens.

6514. **Mariopteris (Pseudopecopteris) decipiens** Lesquereux. Illustrated specimen.
McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Bull. No. 98, U. S. Geol. Surv., 1893, p. 47, pl. 1, figs. 5–8; pl. 2, figs. 1–3.

=Mariopteris capitata.

6743 **Mariopteris occidentalis** David White. Types.
to McAlester (Penn.). Near McAlester, Indian Territory.
6746
6749. White, David, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 480, pl. 67, figs. 1–6.
6751.

6748. **Mariopteris occidentalis villosa** David White. Types.
6750. McAlester (Penn.). Two miles east of Krebs, McAlester Coal Field, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 482, pl. 67, figs. 8, 8a, 9.

13531. **Mariopteris sphenopteroides** (Lesquereux) Zeiller. Types.
13532. Allegheny (Penn.). Mazon Creek, Illinois, and Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 32.

See Odontopteris sphenopteroides.

5707 **Mariopteris sphenopteroides** (Lesquereux) Zeiller.
to Illustrated specimens.
5710. Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 31, pl. 9, figs. 1, 2; pl. 10, figs. 1, 2.

5666. **Mariopteris** sp. David White.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 34, pl. 7, fig. 6.

14438. **Mariopteris** sp. David White.
Cherokee, Des Moines (Penn.). Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 33, pl. 9, fig. 3.

8515. **Marsilea bendirei** Ward. Type.
(2541.) Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Ward, Fifth Ann. Rept. U. S. Geol. Surv., 1885, p. 446.

=Hydrangea bendirei.
See Porana bendirei.

5925. **Matonidium althausii** (Dunker) Ward. Illustrated specimens.
7404. Lakota (Low. Cret.). Cliff on north side Pine Creek, near Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 653, pl. 160, figs. 5–8.

31580. **Matonidium althausii** (Dunker) Ward. Illustrated specimen.
(4004.) Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 230, pl. 45, fig. 23.

See Osmunda dicksonoides.

11448 **Megalopteris dentata** Lesquereux. Types.
to Pottsville (Penn.). Rushville, Ohio.
11450.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 833.

11704. **Megalopteris fasciculata** Lesquereux. Type.
Pottsville (Penn.). Port Byron, Rock Island County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 24, fig. 2; Text, I, 1880, p. 150.

11700. **Megalopteris ? marginata** Lesquereux. Type.
Pottsville (Penn.). Port Byron, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog P, Atlas, 1879, p. 5, pl. 24, figs. 4, 4a; Text, I, 1880, p. 152.

11463. **Megalopteris serrata** Lesquereux. Types.
11464. Pottsville (Penn.). Rushville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 834.

17038. **Megaphyton elongatum** Kidston. Illustrated specimen.
Upper Coal Measures (Carb.). Radstock, Somerset, England.

Trans. Royal Society of Edinburgh, XXXIII, Pt. III, 1888, p. 390, pl. 26, fig. 1.

17039. **Megaphyton goldenbergii** Weiss. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 61, fig. 4; Text, I, 1880, p. 349.

720. **Menispermites acerifolia** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 96, pl. 20, fig. 3.

=Menispermites menispermifolius.
See Acerites menispermifolius.

714. **Menispermites grandis** Lesquereux. Types.
715. Dakota (Cret.). Near Clay Center, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 80, pl. 15, figs. 1, 2.

7664. **Menispermites knightii** Knowlton. Type.
Montana (Cret.). West of Harpers Station, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 61, pl. 15, fig. 2.

720. **Menispermites menispermifolius** (Lesquereux) Knowlton.
See Menispermites acerifolia and Acerites menispermifolius.

709 to 711. **Menispermites obtusiloba** Lesquereux. Types.
Dakota (Cret.). Bluffs of the Salina River, eight miles above its mouth, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 94, pl. 25, figs. 1–2; pl. 26, fig. 3.

712. **Menispermites obtusiloba** Lesquereux. Illustrated specimen.
Dakota (Cret.). Salina, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 78, pl. 15, fig. 4.

713. **Menispermites salinensis** Lesquereux. Illustrated specimens.
713a. Dakota (Cret.). Salina River, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 95, pl. 20, figs. 4, 5.

3282. **Menispermites tenuinervis** Fontaine. Type.
Potomac (Low. Cret.). Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 322, pl. 172, fig. 8.

3248. **Menispermites virginiensis** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 321, 322, pl. 161, figs. 1, 2.

5392. 5393. **Menispermites virginensis** Fontaine. Illustrated specimens.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 360, pl. 4, figs. 7, 8.

3470. 30895 to 30899. **Mertensides bullatus** (Bunbury) Fontaine.
Illustrated specimens.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 35, pl. 15, figs. 2–5; pl. 16, figs. 1–3; pl. 17, figs. 1, 2; pl. 18, figs. 1, 2; pl. 19, fig. 1.

30900. **Mertensides distans** Fontaine. Type.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 39.

526. **Mimosites linearifolius** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 417; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 300, pl. 59, fig. 7.

=Mimosites linearis.

1920. **Mimosites linearifolius** Lesquereux. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 203, pl. 37, fig. 10.

=Mimosites linearis.
See Cæsalpinia? linearis.

526. 1920. **Mimosites linearis** (Lesquereux) Knowlton.
Type and illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 145.

See Mimosites linearifolius and Cæsalpinia? linearis.

5356. **?Monimiopsis fraterna** Saporta. Illustrated specimen.
Fort Union (Tert.) Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 52, pl. 25, fig. 3.

132 to 135. **Musophyllum complicatum** Lesquereux. Types.
Green River (Tert.). Eight miles southeast of Green River Station, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873, [1874], p. 418; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 96, pl. 15, figs. 1–4.

4332. **Musophyllum complicatum** Lesquereux.
4484. Illustrated specimen.
Fort Union (Tert.). Northeast side of Crescent Hill, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 686, pl. 83, fig. 1.

30804. **Myelophycus curvatum** Ulrich. Type.
Yakutat series (Lias). Woody Island, Kadiak, Alaska.
Ulrich, Harriman Alaska Exped., IV, 1904, p. 145, pl. 13, fig. 2.

143 to 146. **Myrica acuminata** Unger. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 130, pl. 17, figs. 1–4.
=Ceratopetalum americanum.

1589 to 1593. **Myrica alkalina** Lesquereux. Types.
Green River (Tert.). Alkali Station, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 149, pl. 45a, figs. 10, 12–15.

408. 774. **Myrica ambigua** Lesquereux. Types.
Livingston (Cret.). Six miles above Spring Canyon, Gallatin County, Montana.
Lesquereux, Ann. Rept. U. S. Geol Surv. Terr., 1871 [1872], p. 297.
=Celastrinites ambiguus.
See Celastrinites lævigatus.

1653 to 1656. **Myrica amygdalina** Saporta. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 147, pl. 26, figs. 1–4.

50061. **Myrica aspera** Lesquereux. Type.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 66, pl. 2, fig. 11.

5208. **Myrica bolanderi?** Lesquereux. Illustrated specimen.
Laramie (Cret.). Mount Evarts, near summit, west end, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 658, pl. 78, fig. 4.

155. **Myrica brongniartii?** Ettingshausen. Illustrated specimen.
Green River (Tert.). Elko, Nevada.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 135, pl. 17, fig. 15.

1634 to 1639. 1641. 1646. **Myrica calicomæfolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 146, pl. 26, figs. 5–14.
=Myrica drymeja.

147. **Myrica copeana** Lesquereux. Type.
Green River (Tert.) Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 411; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 131, pl. 17, fig. 5.

607. **Myrica cretacea** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 392; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 339, pl. 3, fig. 4.

=Myrica dakotensis.

1373. **Myrica cuspidata** (Lesquereux) Dawson. Type.
Upper Eocene (Tert.). Coal Harbor, Unga Island, Alaska.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 146.

See Comptonia cuspidata.

607. **Myrica dakotensis** Lesquereux. Types.
608. Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 35, pl. 4, fig. 9.

See Myrica cretacea.

1647 **Myrica diversifolia** Lesquereux. Types.
to Green River (Tert.). Florissant, Colorado.
1651.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 148, pl. 25, figs. 7, 8, 10, 12.

=Cratægus flavescens.

1642. **Myrica drymeja** (Lesquereux) Knowlton. Type.
See Rhus drymeja, Callicoma microphylla, and Myrica calicomæfolia (catalogue numbers 1634–1636, 1641, 1646).

2572. **Myrica elænoides** Lesquereux. Type.
Eocene (Tert.). Wickliffe, Ballard County, Kentucky.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 12, pl. 4, fig. 5.

1661 **Myrica fallax** Lesquereux. Types.
to Green River (Tert.). Florissant, Colorado.
1666.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 147, pl. 32, figs. 11–16.

8291. **Myrica? idahoensis** Knowlton. Type.
Payette (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 724, pl. 99, fig. 7.

538. **Myrica insignis** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rep. U. S. Geol. Surv. Terr., 1874 [1876], p. 312; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 135, pl. 65, figs. 7, 8.

4369. **Myrica lamarensis** Knowlton. Type.
Miocene (Tert.) East bank Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 693, pl. 84, fig. 5.

7623. **Myrica lanceolata** Knowlton. Types.
7624. Payette (Tert.). Cartwright Ranch, Shafer Creek, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 724, pl. 99, figs. 5, 6.

153. **Myrica latiloba acutiloba** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 412; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 134, pl. 17, fig. 13.

50069. **Myrica longa** Heer. Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 67, pl. 3, fig. 3,

150. **Myrica nigricans** Lesquereux. Types.
151. Green River (Tert.). Green River Station, Wyoming.
401a.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., Suppl., 1871 [1872], p. 6; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 132, pl. 17, figs. 9–11.

50050. **Myrica obliqua** Knowlton. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Knowlton in Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 68, pl. 64, fig. 16.

1629. **Myrica obscura** Lesquereux. Types.
1630. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 145, pl. 32, figs. 9, 10.

606. **Myrica obtusa** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 63, pl. 19, fig. 10.

8532. **Myrica oregoniana** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 33, pl. 3, fig. 4.

154. **Myrica partita** Lesquereux. Type.
Green River (Tert.). Elko, Nevada.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 413; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 134, pl. 17, fig. 14.

1632. **Myrica polymorpha** Schimper. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 146, pl. 25, fig. 1.

1400. **Myrica premissa** (Lesquereux) Knowlton. Type.
Upper Eocene (Tert.). Chignik Bay, Alaska.
Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 222.
See Comptonia premissa.

50021. **Myrica schimperi** Lesquereux. Type.
Dakota (Cret.). Four miles southwest of Brookville, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 66, pl. 2, fig. 12.

1660. **Myrica scottii** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 147, pl. 32, fig. 17.

4399. **Myrica scottii** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 692, pl. 74, fig. 6.

755. **Myrica ? semina** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Decatur, Nebraska.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 63, pl. 27, fig. 4.

138 to 142. 813. **Myrica torreyi** Lesquereux. Illustrated specimens.
Laramie (Cret.). Black Buttes, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 129, pl. 16, figs. 3–8, 10.

5361. **Myrica torreyi** Lesquereux. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 32, pl. 14, fig. 5.

148. 149. **Myrica undulata ?** Heer. Illustrated specimens.
Green River (Tert.). Elko, Nevada.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 131, pl. 17, figs. 7, 8.

4487. 5216. **Myrica wardii** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 692, pl. 84, fig. 4.

1594 to 1597. **Myrica zachariensis** Saporta. Illustrated specimens.
Green River (Tert.). Alkali Station, Wyoming.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 146, pl. 45a, figs. 6–9.

2777. **Myrsine crassa** Lesquereux. Types.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 114, pl. 52, figs. 2, 3.

50039. **Myrsinites? gaudini** Lesquereux. Illustrated specimens.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 115, pl. 52, fig. 4.

2754. **Myrtophyllum warderi** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 136, pl. 53, fig. 10.

3211. **Nageiopsis angustifolia** Fontaine. Types.
3800. Potomac (Low. Cret.). Fredericksburg; fishing hut above
3801. Dutch Gap Canal; roadside near Potomac Run; 72d
3804. milepost; near Telegraph Station, Virginia; Fort Wash-
3805. ington, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 202, pl. 86, figs. 8, 9; pl. 87, figs. 2–6; pl. 88, figs. 1, 3, 4, 6–8; pl. 89, fig. 2.

7385. **Nageiopsis angustifolia** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 684, pl. 168, fig. 7.

3290. **Nageiopsis crassicaulis** Fontaine. Type.
3806. Potomac (Low. Cret.). Roadside near Potomac Run; Fred-
3807. ericksburg; Kankey's; 72d milepost near Brooke;
3921. banks of Dutch Gap Canal; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 198, pl. 79, figs. 2, 6; pl. 82, fig. 1; pl. 84, figs. 3, 9, 11.

3214. **Nageiopsis decrescens** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run (Fredericksburg Area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 199, pl. 77, fig. 3.

3364. **Nageiopsis heterophylla** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 201, pl. 84, fig. 4; pl. 86, figs. 6, 7; pl. 88, figs. 2, 5.

3442. **Nageiopsis inæquilateralis** Fontaine. Type.
Potomac (Low. Cret.). Kankey's, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 200, pl. 85, fig. 6.

3424. **Nageiopsis latifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 198, 199, pl. 82, fig. 3.

3210. **Nageiopsis longifolia** Fontaine. Types.
3803. Potomac (Low. Cret.). Fredericksburg; Kankey's; near
3910. Telegraph Station; 72d milepost near Brooke; Deep
3911. Bottom; banks of Dutch Gap Canal, Virginia.
3948.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 195, 196, pl. 75, fig. 1; pl. 76, figs. 2–6; pl. 77, figs. 1, 2; pl. 78, figs. 1–5; pl. 79, fig. 7; pl. 85, figs. 1, 2, 8, 9.

4000. **Nageiopsis longifolia** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 259, pl. 68, fig. 12.

See Angiopteridium strictinerve?.

3998. **Nageiopsis longifolia** Fontaine. Illustrated specimens.
3999. Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 259, pl. 68, figs. 9–11.

7383. **Nageiopsis longifolia** Fontaine? Illustrated specimens.
7384. Lakota (Low. Cret.). Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 683, pl. 168, figs. 5, 6.

8363. **Nageiopsis longifolia** Fontaine. Illustrated specimens.
(2437.) Neocomian or Jurassic. Corwin Coal Mine and Cape Lisburne, Alaska.
8424 to 8426. Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 171, pl. 45, figs. 1–5.
8429. (2320.) See Baiera palmata and Irites alaskana.

3365. **Nageiopsis microphylla** Fontaine. Types.
3791. Potomac (Low. Cret.). Fredericksburg; roadside near
3802. Potomac Run; fishing hut above Dutch Gap Canal,
3966. Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 201, 202; pl. 84, fig. 6; pl. 85, fig. 14; pl. 86, figs. 1–3, 5.

3213. **Nageiopsis ovata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 199, pl. 77, fig. 4; pl. 80, fig. 5.

3199. **Nageiopsis recurvata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; banks of Dutch Gap Canal; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 198, pl. 75, fig. 2; pl. 79, fig. 4; pl. 80, fig. 3.

3447. **Nageiopsis subfalcata** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 203, pl. 168, fig. 4.

3212. **Nageiopsis zamioides** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; banks of Dutch Gap Canal; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 196, 197, pl. 79, figs. 1, 3; pl. 80, figs. 1, 2, 4; pl. 81, figs. 1–6.

747. **Negundioides acutifolia** Lesquereux. Type.
Dakota (Cret.). Ten miles south of Lancaster, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 97; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 97, pl. 21, fig. 5.

569. **Negundo triloba** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 57; Rept. U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 23, fig. 2; Mon. XXXV, U. S. Geol. Surv., 1898, p. 115, pl. 31, fig. 5.

370. **Nelumbium lakesianum** Lesquereux. Types.
371. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., 1873 [1874], p. 403; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 252, pl. 46, figs. 1, 2 (as N. lakesii).

540. **Nelumbo intermedia** Knowlton. Types.
7670. Montana (Cret.). Point of Rocks, Wyoming.
7671.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 53, pl. 13, figs. 3–5.

See Lemna scutata.

11238. **Neuropteris aldrichi** (Lesquereux) David White. Types.
12087. Pennsylvanian. Jefferson mines, Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 39, figs. 1–3; Text, I, 1880, p. 171.

See Callipteridium aldrichi.

11586. **Neuropteris angustifolia** Brongniart. Illustrated specimens.
11587. Allegheny (Penn.). Morris, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 3, pl. 8, fig. 2; Text, I, 1880, p 89.

=Neuropteris scheuchzeri.

10704 **Neuropteris aspera** Lesquereux. Illustrated specimens.
to Allegheny (Penn.). Cannelton and Pittston, Pennsylvania.
10707.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 736, pl. 96, figs. 4–7.

10531. **Neuropteris auriculata** Brongniart. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 3, pl. 6, fig. 11; Text, I, 1880, p. 85.

10785. **Neuropteris carceraria** David White. Types.
10791. Cherokee (Penn.). Lansing, Kansas.
14831. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.
Allegheny (Penn.). Cannelton, Pennsylvania.

David White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 99.

See Odontopteris monstruosa.

10621 **Neuropteris decipiens** Lesquereux. Types.
to Allegheny (Penn.). Mazon Creek, Grundy County, Illi-
10624. nois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 733, pl. 94, figs. 1, 2.

5658. **Neuropteris dilatata** (Lindley and Hutton) Lesquereux.
5672. Illustrated specimens.
6038. Cherokee, Des Moines (Penn.). Pitcher's and Owen's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 137, pl. 41, fig. 6; pl. 42, fig. 1; pl. 43; pl. 44, fig. 4.

11839. **Neuropteris elrodi** Lesquereux. Type.
Pittston (Penn.). Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 3, pl. 13, fig. 4; Text, I, 1880, p. 107.

11840. **Neuropteris elrodi** Lesquereux. Illustrated specimens.
11841. Pittston (Penn.). Tracy City, Tennessee.
Pennsylvanian. Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 735, pl. 96, figs. 1, 2.

10806 to 10812. **Neuropteris griffithii** Lesquereux. Types.
Anthracite series (Penn.). Port Griffith Railroad cut, near Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 737, pl. 95, figs. 3–8.

6508. **Neuropteris griffithii occidentalis** David White. Type.
6509. McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 505.

12667 to 12670. **Neuropteris harrisi** David White. Types.
Allegheny? (Penn.). Near Russellville, Arkansas.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 506, pl. 68, figs. 5–9.

12072 to 12074. **Neuropteris hastata** David White. Types.
Cherokee (Penn.). Lansing, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 97.

1621 to 1624. 8636. **Neuropteris lindahli** David White. Types.
Erie limestone (Penn.). Kansas City, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 96.

30861. **Neuropteris missouriensis** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 104.

5472. **Neuropteris missouriensis** Lesquereux.
5630 to 5632. Illustrated specimens.
Cherokee, Des Moines (Penn.). Hobbs's and Pitcher's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 130, pl. 41, figs. 4, 5; pl. 42, fig. 4; pl. 45, fig. 3.

6526. **Neuropteris missouriensis nervosa** David White. Type.
McAlester (Penn.). Johnsville slopes near Savanna, McAlester Coal Field, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 508.

10258. **Neuropteris rarinervis** Bunbury. See Idiophyllum rotundifolium.

3590. **Neuropteris scheuchzeri** Hoffman. Illustrated specimens.
5633. Cherokee, Des Moines (Penn.). Owen's Coal Mine, and
6101. near Gilkerson's Ford, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 132, pl. 36, fig. 4; pl. 42, fig. 3; pl. 64, fig. d..

11744. **Neuropteris scheuchzeri** Hoffman. Supplemental type.
Severy (Penn.). Osage, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 100.

See Lesleya microphylla.

11586. **Neuropteris scheuchzeri** Hoffman. Supplemental types.
11587. Allegheny (Penn.). Morris, Grundy County, Illinois.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 133.

See Neuropteris angustifolia.

11155. **Neuropteris smithii** Lesquereux. Type.
Pottsville (Penn.). Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 3, pl. 13, fig. 2; Text, I, 1880, p. 106.

11156. **Neuropteris smithii** Lesquereux. Illustrated specimen.
Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 734, pl. 96, figs. 3, 3a.

8205. **Neuropteris** sp.? Emmons.
Triassic. Chatham County, North Carolina.

Emmons, Geol. Rept. of the Midland Counties of North Carolina, 1856, p. 349, pl. 2, fig. 2.

=Laccopteris lanceolata.
See Pecopteris sp.

6940. **Nillsonia gibbsii** (Newberry) Hollick. Type.
Puget Sound (Cret.). Point Doughty, Orcas Island, Washington.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 16, pl. 15, fig. 2.

See Tæniopteris gibbsii.

1357. **Nœggerathia spatulata** Dana. Type.
Coal Measures (Penn.). District of Illawarra, New South Wales, Australia.

Dana, Wilkes, U. S. Expl. Exped., X, 1849, p. 715; Atlas, p. 5, pl. 12, fig. 9.

=Nöggerathiopsis spat[h]ulata.

1357. **Nöggerathiopsis spat[h]ulata** (Dana) Feismantel. Type.
Coal Measures (Penn.). District of Illawarra, New South Wales, Australia.

Feismantel, Mem. Geol. Surv. New South Wales, Pal., No. 3, 1890, p. 154.

See Nœggerathia spatulata.

7034 to 7036. **Nordenskiöldia borealis** Heer. Illustrated specimen.
Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 137, pl. 65, fig. 1; pl. 68, figs. 4–6.

50023. **Nordenskiöldia borealis** Heer. Illustrated specimen.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 219, pl. 44, fig. 6.

5355. **Nyssa buddiana** Ward. Type.
Laramie? (Cret.). Hodges Pass, Wyoming.

Ward. Bull. No. 37, U. S. Geol. Surv., 1887, p. 53, pl. 25, fig. 4.

6938. **Nyssa (?) cuneata** Newberry. Type.
Puget Sound (Cret.). Point Doughty, Orcas Island, Washington.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 125, pl. 17, fig. 4.

See Ficus (?) cuneatus.

303. 506. **Nyssa lanceolata** Lesquereux. Illustrated specimens.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 245, pl. 35, figs. 5, 6.

6893. **Nyssa vetusta** Newberry. Type.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 125, pl. 1, fig. 2.

See Magnolia obovata.

5623. **Odontopteris? bradleyi** Lesquereux. Illustrated specimen.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 125, pl. 42, fig. 2.

11287. **Odontopteris deformata** Lesquereux. Type.
Pennsylvanian. Rhode Island.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 141; III, 1884, p. 743, pl. 97, fig. 5.

14831. **Odontopteris monstruosa** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. of Prog. P, Text, III, 1884, p. 741, pl. 97, fig. 3.

=Neuropteris carceraria.

2086. **Odontopteris papilionacea** David White. Type.
Cherokee (Penn.). Lansing, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 95.

11274 to 11276. **Odontopteris patens** Lesquereux. Types.
Pennsylvanian. Rhode Island.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 740, 741, pl. 97, fig. 7.

13531. 13532. **Odontopteris sphenopteroides** Lesquereux. Types.
Allegheny (Penn.). Mazon Creek, Illinois, and Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 4, pl. 21, figs. 3, 4; Text, I, 1880, p. 139.

=Mariopteris sphenopteroides.

8215. **Odontopteris tenuifolius** Emmons. Type.
Triassic. Haywood, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 105, pl. 3, fig. 5.

=Acrostichites tenuifolius.

5694. 5695. 5696. 14467. 14468. **Oligocarpia missouriensis** David White. Types.
Cherokee, Des Moines (Penn.). Owen's and Pitcher's coal mines, and near Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 66, pl. 20, fig. 1; pl. 21, figs. 1–4.

15501. 15502. **Omphalophloios cyclostigma** (Lesquereux) David White. Types.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p, 221, pl. 66, fig. 1.

See Lepidodendron cyclostigma.

5636. 6024. 6025. 6027. to 6030. 8797. **Omphalophloios cyclostigma** (Lesquereux) David White. Illustrated specimens.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 218, pl. 65; pl. 66, figs. 2–5; pl. 67, figs. 1, 2; pl. 68, figs. 1, 2.

120. 121. **Onoclea fecunda** (Lesquereux) Knowlton. Types.
Laramie (Cret.). Marshall mine, near Erie, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 153.

See Caulinites fecundus.

5106 to 5109. **Onoclea minima** Knowlton. Types.
Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 656, pl. 77, figs. 11–15.

6971. 6976. 6977. **Onoclea sensibilis** Linnæus. Illustrated specimens.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 39; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 8, fig. 1; pl. 9, figs. 1, 2.

=Onoclea sensibilis fossilis.

6971. **Onoclea sensibilis fossilis** Newberry. Types.
6976. Fort Union (Tert.). Fort Union, Buford County, North
6977. Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 8, pl. 23, fig. 3; pl. 24, figs. 1, 3.

See Onoclea sensibilis.

8368. **Onychiopsis psilotoides** (Stokes and Webb) Ward.
8369. Illustrated specimens.
2434.) Jurassic? Corwin Coal Mine, east of Cape Lisburne, Alaska.

Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 155, pl. 39, figs. 3–6.

See Aspidium oerstedi.

128. **Opegrapha antiqua** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 36, pl. 1, figs. 1, 1a.

1617. **Ophioglossum alleni** Lesquereux. Type.
Green River (Tert.). South Park, Florissant, Colorado.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 371.

=Tmesipteris alleni.

See Salvinia alleni.

641. **Oreodaphne cretacea** Lesquereux. Type.
Dakota (Cret.). Western Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 84, pl. 30, fig. 5.

2525. **Oreodaphne lithæformis** Lesquereux. Type.
Eocene (Tert.). Lassen County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 30, pl. 14, fig. 4.

16. **Osmunda affinis** Lesquereux. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 60, pl. 4, fig. 1.

4288. **Osmunda affinis** Lesquereux. Illustrated specimen.
5235. Miocene (Tert.). Hill north of Lost Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 673, pl. 80, figs. 4, 5.

3260. **Osmunda dicksonioides** Fontaine. Type.
3779 Potomac (Low. Cret.). Hillside near Potomac Run, Vir-
to ginia.
3781.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 146, 147, pl. 41, fig. 5; pl. 58, fig. 9; pl. 59, figs. 1, 4, 8, 9, 11; pl. 60, figs. 2, 4, 5, 9; pl. 61, figs. 1, 2.

4004. **Osmunda dicksonioides** Fontaine. Supplemental types.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Matonidium althausii (part).

=Gleichenia nordenskiöldi (part).

3427. **Osmunda dicksonioides latipennis** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run (Fredericksburg Area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 147, 148, pl. 60, figs. 1, 3; pl. 61, fig. 3.

3392. **Osmunda sphenopteroides** Fontaine. Type.
3440. Potomac (Low. Cret.). Banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 145, 146, pl. 25, fig. 13.

8228. **Otozamites carolinensis** Fontaine. Type.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, pp. 117, 118, pl. 52, fig. 6; in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 298, pl. 42, fig. 6.

See Albertia latifolia.

8227. **Otozamites carolinensis** Fontaine. Illustrated specimen.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 298, pl. 42, fig. 5.

549. **Ottelia americana** Lesquereux. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 98, pl. 61, fig. 8.

8243. **Pachyphyllum peregrinum** (Lindley and Hutton) Schimper. Illustrated specimen.
Triassic. Turners Falls, Massachusetts.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 108, pl. 50, fig. 4.

=Pagiophyllum peregrinum.
See Walchia variabilis.

8245. **Pachypteris** sp.? Emmons.
Triassic. Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 112, fig. 80.

=Abietites carolinensis.
See Palissya carolinensis.

3748. **Pagiophyllum dubium** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 271, pl. 39, figs. 2–11.

8243. **Pagiophyllum peregrinum** (Lindley and Hutton) Schenck. Illustrated specimen.
Triassic. Turners Falls, Massachusetts.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv. Pt. II, 1900, p. 308.

See Walchia variabilis and Pachyphyllum peregrinum.

8244. **Pagiophyllum peregrinum** (Lindley and Hutton) Schenck. Illustrated specimen.
Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 308, pl. 46.

50022. **Palæocassia laurinea** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 147, pl. 64, fig. 12.

30782. **Palæodictyon magnum laxum** Ulrich. Type.
Yakutat series (Lias). Woody Island, near Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 137, pl. 15, fig. 1.

25023. **Palæophycus gracilis** Lesquereux. Type.
Pennsylvanian. Vigo County, Indiana.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. B, fig. 10; Text I, 1880, p. 11.

25020. **Palæophycus milleri** Lesquereux. Type.
Pennsylvanian. Vigo County, Indiana.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. A, figs. 8–8p; Text I, 1880, p. 10.

30876. **Paleohillia arkansana** Knowlton. Type.
Trinity (Low. Cret.). Northwest of Center Point, Howard County, Arkansas.

Knowlton, Bull. Torrey Bot. Club, XXII, No. 9, 1895, pp. 287–290, text figs. 1–3.

8235. **Palissya braunii** Endlicher. Illustrated specimens.
8236. Triassic. Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 107, pl. 50, figs. 1, 2; pl. 51, fig. 1.

=Palissya sphenolepis.
See Walchia longifolius.

8241. **Palissya brevifolia** (Emmons) Fontaine. Type.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 307.

See Walchia brevifolia and Cheirolepis muensteri.

8242. **Palissya brevifolia** (Emmons) Fontaine. Illustrated specimen.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 307, pl. 45, fig. 4.

8245. **Palissya carolinensis** Fontaine. Type.
Triassic. Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 109, pl. 51, fig. 5.

=Abietites carolinensis.

8239. **Palissya diffusa** (Emmons) Fontaine. Illustrated specimens.
8240. Triassic. Ellington's, near Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. I, 1900, p. 306, pl. 45, figs. 2, 3.

8235. **Palissya sphenolepis** (Fr. Braun) Brongniart.
8236. Illustrated specimens.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 305, pl. 44, figs. 1, 2; pl. 45, fig. 1.

See Walchia longifolius and Palissya braunii.

50013. **Paliurus anceps** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 166, pl. 35, fig. 4.

412 to 414. **Paliurus colombi** Heer. Illustrated specimens.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 273, pl. 50, figs. 13–15.

4346. **Paliurus colombi** Heer. Illustrated specimen.
Miocene (Tert.). Head of Tower Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 740, pl. 101, fig. 7.

5322. **Paliurus colombi** Heer. Illustrated specimens.
5323. Fort Union (Tert.). Burns's Ranch, below Glendive, Mon-
5324. tana.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 75, pl. 33, figs. 8–10.

5396. **Paliurus colombi** Heer. Illustrated specimen.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 230, pl. 9, fig. 2.

50015. **Paliurus cretaceus** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 165, pl. 35, fig. 3.

415. **Paliurus florissanti** Lesquereux. Type.
Green River (Tert.). Near Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 416; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 274, pl. 50, fig. 18.

746. **Paliurus membranaceus** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 101; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 108, pl. 20, fig. 6.

50014. **Paliurus membranaceus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 167, pl. 35, fig. 5.

5116 to 5118. **Paliurus minimus** Knowlton. Types.
Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 659, pl. 77, figs. 7–10.

1869. **Paliurus orbiculatus** Saporta. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 188, pl. 38, fig. 12.

50012. **Paliurus ovalis** Dawson. Illustrated specimen.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 166, pl. 35, fig. 7.

5326 to 5328. **Paliurus pealei** Ward. Types.
Fort Union (Tert.). One-half mile from Little Missouri River, North Dakota.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 76, pl. 33, figs. 13, 14.

5325. **Paliurus pulcherrimus** Ward. Type.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 75, pl. 33, fig. 11.

416. 416a. 416b. 418. **Paliurus zizyphoides** Lesquereux. Illustrated specimens.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 274, pl. 51, figs. 1, 4–6.

5210. **Paliurus zizyphoides?** Lesquereux. Illustrated specimen.
Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 660, pl. 78, fig. 3.

523. 524. **Palmocarpon commune** Lesquereux. Illustrated specimens.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 119, pl. 13, figs. 4–7.

=Palmocarpon palmarum.

525. **Palmocarpon compositum** Lesquereux. Type.
Laramie? (Cret.). Placer Mountain, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 119, pl. 11, fig. 4.

See Carpolithes compositus.

522. **Palmocarpon corrugatum** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 121, pl. 11, fig. 11.

520. **Palmocarpon mexicanum** Lesquereux. Illustrated specimen.
Laramie (Cret.). Placer Mountain, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 119, pl. 11, fig. 5.

523. 524. **Palmocarpon palmarum** Lesquereux. See Palmocarpon commune.

518. 519. **Palmocarpon subcylindricum** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 121, pl. 11, figs. 12, 12a.

521. **Palmocarpon truncatum major** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 121, pl. 11, figs. 6, 7.

517. **Palmocarpon truncatum minor** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 121, pl. 11, figs. 8, 9.

3651. **Palmoxylon cellulosum** Knowlton. Type.
Miocene ? (Tert.). Rapides Parish, Louisiana.

Knowlton ,Proc. U. S. Nat. Mus., XI, 1888, p. 90, pl. 30, fig. 2.

50026 to 50028. **Parrotia grandidentata** Lesquereux. Types.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 140, pl. 39, figs. 2–4.

14873. **Pecopteris** cf. **arborescens** (Schlotheim) Brongniart. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 78, pl. 44, fig. 3.

5595. 5596. **Pecopteris** cf. **arborescens** (Schlotheim) Brongniart. Illustrated specimens.
Cherokee, Des Moines (Penn.). Gilkersons Ford, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 78, pl. 36, fig. 3; pl. 47, fig. 6?

5972. 7407. **Pecopteris borealis** Brongniart. Illustrated specimen.
Lakota (Low. Cret.). East bank of Oak Creek, near Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 655, pl. 160, figs. 14, 15.

3202. 3923. **Pecopteris brevipennis** Fontaine. Types.
Potomac (Low. Cret.). Hillside near Potomac Run; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 86, pl. 21, figs. 1–3.

3301. 3885 to 3887. 3922. **Pecopteris browniana** Dunker. Illustrated specimens.
Potomac (Low. Cret.). Baltimore, Maryland; Fredericksburg; banks of Dutch Gap Canal; 72d milepost, near Brooke; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 88, pl. 22, figs. 10, 11; pl. 23, figs. 2–7; pl. 26, figs. 3, 13.

=Cladophlebis browniana.

13172 to 13174. 30857. **Pecopteris clintoni** Lesquereux. Types.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 8, pl. 42, figs. 1, 3, 5; Text, I, 1880, p. 251.

13173. =Pecopteris pseudovestita.

5605. **Pecopteris clintoni** Lesquereux. Illustrated specimens.
5606. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 94, pl. 34; pl. 35, fig. 4.

13181. **Pecopteris clintoni** Lesquereux. Illustrated specimens.
13183. Cherokee, Des Moines (Penn.). Clinton, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 94.

See Callipteridium membranaceum (part).

13376. **Pecopteris concinna** Lesquereux. Supplemental type.
Pennsylvanian. Archbald, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa. Rept. Prog. P, Text, I, 1880, p. 264.

3233. **Pecopteris constricta** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 86, pl. 20, figs. 1, 2, 4.

5621. **Pecopteris (Dactylotheca) dentata** Brongniart.
5641 to 5643. 5655. 5739. 12772. Illustrated specimens.
Cherokee, Des Moines (Penn.). Owen's and Pitcher's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 75, pl. 24, figs. 1, 2; pl. 25; pl. 26, figs. 2, 3, 4; pl. 27.

See Pecopteris pennæformis.

2526. **Pecopteris denticulata** Heer. Supplemental type.
Jurassic. Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32.

=Cladophlebis vaccensis.

30856. **Pecopteris erosa** Gutbier. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 44, fig. 1; Text, I, 1880, p. 255.

14237 to 14240. **Pecopteris fontainei** Lesquereux. Illustrated specimens.
Allegheny (Penn). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 46, figs. 4, 5; Text, I, 1880, p. 248; III, 1884, p. 761.

14248. 14249. **Pecopteris fontainei** Lesquereux. Illustrated specimens.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesley, Dictionary Foss. Plants Pa., Second Geol. Surv. Pa., Rept. Prog. P 4, II, 1889, p. 606.

12420 to 12422. **Pecopteris georgiana** Lesquereux. Types.
Pottsville (Penn.). Near Cole City, Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 759, pl. 98, figs. 6, 6a.

7373. **Pecopteris geyleriana** Nathorst. Illustrated specimens.
7405. Lakota (Low. Cret.). Near Robbins's Ranch, and north
7414. side Pine Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 654, pl. 16, figs. 9–13.

5594. **Pecopteris (Asterotheca) hemitelioides** Brongniart. Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 79, pl. 35, fig. 5.

5598. **Pecopteris jenneyi** David White. Types.
5599. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 80, pl. 36, figs. 1, 2.

12542. **Pecopteris lanceolata** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 7, pl. 39, figs. 9, 9a; Text, I, 1880, p. 227.

See Alethopteris lanceolata.

3382. **Pecopteris lyratifolia** (Goeppert) Lesquereux. Illustrated specimen.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 8, pl. 48, figs. 4, 4a–c; Text, I, 1880, p. 259.

3326. **Pecopteris microdonta** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; entrance to Trent's Reach; near Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 85, pl. 19, fig. 8; pl. 20, figs. 5, 11.

7431. **Pecopteris montanensis** Fontaine. Type.
Kootanie (Low. Cret.). Great Falls, Montana.

Fontaine, Proc. U. S. Nat. Mus., XV, 1892, p. 492, pl. 83, figs. 1, 1a.

589. **Pecopteris nebraskana?** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 46, pl. 29, figs. 5, 5a (as Pteris nebraskana).

13377 to 13379. **Pecopteris obsoleta** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 758, pl. 111, figs. 29, 29a, 29b.

30848. **Pecopteris? odontopteroides** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 306, pl. 1, fig. 4.

13385 to 13388. **Pecopteris ornata** Lesquereux. Types.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 760, pl. 111, figs. 30, 30a, 30b.

3327. **Pecopteris ovatodentata** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 85, pl. 15, fig. 8; pl. 22, fig. 12; pl. 23, fig. 1.

3355. **Pecopteris pachyphylla** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 88, pl. 26, figs. 4, 5.

12772. **Pecopteris pennæformis** Brongniart. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 8, pl. 45, figs. 1, 1a; Text, I, 1880, p. 239.

=Pecopteris (Dactylotheca) dentata.

2202. **Pecopteris powellii** Lesquereux. Type.
Triassic? City of Mexico, Mexico.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 26, pl. 1, figs. 1, 1a.

5644. **Pecopteris pseudovestita** David White. Types.
5645. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, and
5648. Clinton, Henry County, Missouri.
5725. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 85, pl. 28, figs. 1,
5809. 2, 3; pl. 29; pl. 30; pl. 31; pl. 32.

See Pecopteris clintoni (part). (Also catalogue numbers 13093, 13097, 13173, 13179.)

12702. **Pecopteris quadratifolia** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 234; III, 1884, p. 756, pl. 100, fig. 1.

14870. **Pecopteris resupinata** Lesquereux. Types.
14871. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesley, Dictionary Foss. Plants Pa., Second Geol. Surv. Pa., Rept. Prog. P 4, II, 1889, p. 608.

6423. **Pecopteris richardsoni** David White. Types.
6426. McAlester (Penn.). One-half mile west of McAlester,
6427. Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 492, pl. 68, figs. 2–4.

12523 **Pecopteris robusta** Lesquereux. Types.
to Pennsylvanian. Port Griffith, Luzerne County, Pennsyl-
12525. vania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 7, pl. 39, figs. 7, 8; Text, I, 1880, p. 229.

7042. **Pecopteris (Phegopteris) sepulta** Newberry. Types.
7043. Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 503.

=Pecopteris (Cheilanthes) sepulta.

7042. **Pecopteris (Cheilanthes) sepulta** Newberry. Types.
7043. Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 12, pl. 62, figs. 5, 6.

See Pecopteris (Phegopteris) sepulta.

13929 to 13931. **Pecopteris serpillifolia** Lesquereux. Types.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 8, pl. 46, figs. 1, 1a, 2, 2a, 3, 3a–d; Text, I, 1880, p. 237.

13864 to 13868. **Pecopteris serrulata** Hartt. Illustrated specimens.
Pottsville (Penn.). Washington County, Arkansas, and Tracy City, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 757, pl. 101, figs. 4, 4a, 6, 6a, 8.

12676. **Pecopteris squamosa** Lesquereux. Illustrated specimen.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 7, pl. 39, figs. 13, 13a; Text, I, 1880, p. 235.

3197. **Pecopteris strictinervis** Fontaine. Types.
3302. Potomac (Low. Cret.). Fredericksburg, Virginia; and
3810. Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 84, pl. 13, figs. 6–8; pl. 19, fig. 9; pl. 20, fig. 3; pl. 22, fig. 13; pl. 170, figs. 5, 6.

=Cladophlebis alata.

4002. **Pecopteris strictinervis** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cladophlebis alata.

4002. **Pecopteris strictinervis** Fontaine. Supplemental type.
Shasta (Low Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Gleichenia nordenskiöldi?

2654. **Pecopteris undulata** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 306.

13127. **Pecopteris vestita** Lesquereux. Types.
13160. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 43, figs. 1, 3, 3a; Text, I, 1880, p. 252.

5646. **Pecopteris vestita** Lesquereux. Illustrated specimens.
5647. Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry
5683. County, Missouri.
5684. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 91, pl. 33, figs.
5685. 1–6; pl. 26, fig. 1.
5688.
5808.

6702. **Pecopteris vestita minor** David White. Type.
McAlester (Penn.). Two miles east of Krebs, McAlester Coal Field, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 495.

3201. **Pecopteris virginiensis** Fontaine. Types.
3808 Potomac (Low. Cret.). Dutch Gap Canal; fishing hut
to above Dutch Gap Canal; Fredericksburg; roadside
3811. near Potomac Run; 72d milepost, near Brooke; near
3926. Telegraph Station, Virginia; and Covington street, Baltimore.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 82, pl. 8, figs. 1–7; pl. 9, figs. 1–6; pl. 24, fig. 2; pl. 169, fig. 3.

8205. **Pecopteris** sp. Emmons.
Triassic. Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 104, pl. 6, fig. 2.

=Laccopteris lanceolata.
See Neuropteris sp.

5609. **Pecopteris** sp. David White.
5613. Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Geol. Soc. Amer., Bull. No. 8, 1897, p. 291.

=Aloiopteris (Corynepteris?) winslovii.

2527. **Persea dilleri** Lesquereux. Type.
Miocene (Tert.). Shasta County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 27, pl. 13, figs. 2–4.

639. **Persea nebrascensis** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Trans. Amer. Philos. Soc., XIII, 1869, p. 431, pl. 23, fig. 10.

=Laurus nebrascensis.

4326. **Persea pseudo-carolinensis** Lesquereux.
Illustrated specimen.
Miocene (Tert.). East bank of Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 725, pl. 95, fig. 4.

2529. **Persea punctulata** Lesquereux. Type.
Miocene? (Tert.). Corral Hollow, Alameda County, California.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 26, pl. 14, fig. 1.

2705. **Persea schimperi** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 103, pl. 16, fig. 5.

640. **Persea sternbergii** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 76, pl. 7, fig. 1.

2796. **Phaseolites formus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 147, pl. 55, fig. 5.

97. **Phragmites alaskana** Heer. Illustrated specimen.
Livingston (Cret.). Six miles above Spring (Rocky) Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 90, pl. 8, fig. 10.

4217. **Phragmites alaskana** Heer. Illustrated specimens.
4218. Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 17, pl. 3, figs. 1, 2.

602. **Phragmites cretaceus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 55, pl. 29, fig. 7.

5104. **Phragmites falcata** Knowlton. Type.
Laramie (Cret.). Near summit of Mount Evarts, west end, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 658, pl. 78, fig. 5.

4497. **Phragmites? latissima** Knowlton. Type.
Fort Union (Tert.). Northeast side of Crescent Hill, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 683, pl. 83, fig. 5.

93. **Phragmites œningensis** Al. Braun. Illustrated specimen.
Denver? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 88, pl. 8, fig. 2.

2756. **Phyllites amissus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 217, pl. 62, fig. 1.

6904. **Phyllites amorphus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 113, pl. 22, fig. 3.

3766. **Phyllites arctica** Knowlton. Type.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 230, pl. 9, figs. 10, 11.

754. **Phyllites betulæfolius** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Trans. Amer. Phil. Soc., XIII, 1869, p. 430, pl. 23, fig. 4; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 112, pl. 28, fig. 7.

8537. **Phyllites bifurcies** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 86, pl. 16, fig. 2.

578. **Phyllites carneosus** Newberry. Types.
6986. Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 75; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 26, figs. 1, 2; Mon. XXXV, U. S. Geol. Surv., 1898, p. 134, pl. 41, fig. 1.

2722. **Phyllites celatus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 215, pl. 61, fig. 1.

4305. **Phyllites crassifolia** Knowlton. Types.
4309. Miocene (Tert.). Fossil Forest Ridge, and Specimen Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 753, pl. 102, figs. 1, 5.

577. **Phyllites cupanioides** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 74; Mon. XXXV, U. S. Geol. Surv., 1898, p. 135, pl. 41, fig. 3.

= Pterospermites cupanioides.
See Phyllites venosus.

7006. **Phyllites cupanioides** Newberry. Illustrated specimen.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, U. S. Geol. Surv., Terr., Ills. Cret. and Tert. Plants, 1878, pl. 20, fig. 5.

= Quercus dubia.

90. **Phyllites cyclophylla** (Lesquereux) Hollick. Type.
Green River (Tert.). Middle Park, Colorado.

Hollick, Bull. Torr. Bot. Club, XXI, 1894, p. 256, pl. 205, fig. 11.

See Salvina cyclophylla.

2749. **Phyllites durescens** Lesquereux. Types.
50149. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 218, pl. 62, figs. 3, 4.

2726. **Phyllites erosus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 216, pl. 61, fig. 4.

8312. **Phyllites flexuosus** Knowlton. Type.
Payette, Miocene (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 735, pl. 102, fig. 8.

2397. **Phyllites fraxineus** Lesquereux. Type.
Pleistocene (Tert.) Bridgeton, New Jersey.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 46.

50122. **Phyllites ilicifolius** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, four miles southwest of Brookville, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 213, pl. 10, fig. 9.

537. **Phyllites improbatus** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 107, pl. 14, fig. 18.

8547. **Phyllites inexpectans** Knowlton. Type.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 86, pl. 16, fig. 6.

50053. **Phyllites innectens** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 219, pl. 65, fig. 6.

50123. **Phyllites lacoei** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 213, pl. 45, fig. 6.

2396. **Phyllites mimusopsoides** Lesquereux. Type.
Pleistocene (Tert.). Bridgeton, New Jersey.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 46.

704. **Phyllites obcordatus** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 136, pl. 5, fig. 2.

See Leguminosites marcouanus.

7635. **Phyllites obscurus** Knowlton. Types.
8313. Payette, Miocene (Tert.). Two miles southeast of Marsh Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 735, pl. 99, figs. 10, 11.

=Phyllites payettensis.

7590. **Phyllites oregonianus** Knowlton. Type.
Miocene (Tert.). Five miles north of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 49, pl. 5, fig. 5.

3297. **Phyllites pachyphyllus** Fontaine. Types.
3860. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 325, pl. 149, fig. 2.

7635. **Phyllites payettensis** Knowlton. Types.
8313. Payette, Miocene (Tert.). Two miles southeast of Marsh Boise County, Idaho.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 163.

See Phyllites obscurus.

8554. **Phyllites personatus** Knowlton. Type.
Clarno beds, Eocene (Tert.). Road crossing Cherry Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 87, pl. 16, fig. 4.

753. **Phyllites rhoifolius** Lesquereux. Types.
6907. Dakota (Cret.). Lancaster County, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 101; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 111, pl. 22, figs. 5, 6.

644. **Phyllites rhomboideus** Lesquereux. Type.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 112, pl. 6, fig. 8.

See Ficus? rhomboidea.

262. **Phyllites sapindiformis** Lesquereux. Type.
Green River (Tert.). Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 301, pl. 29, figs. 6, 7.

30078. **Phyllites saundersi** Knowlton. Types.
30091. Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 157, pl. 25, fig. 2; pl. 33, fig. 2.

751. **Phyllites umbonatus** Lesquereux. Type.
Dakota (Cret.). Near Beatrice, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p, 102; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 113, pl. 19, fig. 4.

752. **Phyllites vanonæ** Heer. Illustrated specimen.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 113, pl. 20, fig. 7.

50051. **Phyllites vanonæ** Heer. Illustrated specimens.
50137. Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 214, pl. 20, fig. 9; pl. 42, fig. 5.

6899. **Phyllites vanonæ** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 136, pl. 3, fig. 4.

See Diospyros primæva.

573. **Phyllites venosus** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 75; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 24, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 136, pl. 30, fig. 4.

577. **Phyllites venosus?** Newberry. Illustrated specimen.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 26, fig. 3.

=Phyllites cupanioides.

50052. **Phyllites zamiæformis** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 23, pl. 2, fig. 7.

7644. **Phyllites** sp. Knowlton.
Montana (Cret.). North Fork of Dutton Creek, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 75, pl. 19, fig. 5.

8549. **Phyllites** sp. Knowlton.
Clarno beds, Eocene (Tert.). Cherry Creek, Crook County, Oregon.

Knowlton Bull. No. 204, U. S. Geol. Surv., 1902, p. 85, pl. 17.

7591. **Phyllites** sp. Knowlton.
Miocene (Tert.). Five miles north of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 50, pl. 6, fig. 1.

3395. **Phyllocladopsis heterophylla** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 204, pl. 84, fig. 5; pl. 167, fig. 4.

590. **Phyllocladus subintegrifolius** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLV, 1868, p. 92; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 54, pl. 1, fig. 12.

=Protophyllocladus subintegrifolius.
See Thinnfeldia subintegrifolia.

50108 to 50110. **Phyllocladus subintegrifolius** Lesquereux. Illustrated specimens.
Dakota (Cret.). Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 34, pl. 2, figs. 1–3.

=Protophyllocladus subintegrifolius.
See Thinnfeldia subintegrifolia.

1361. **Phyllotheca australis** Brongniart. Illustrated specimen.
Upper Coal Measures (Penn.). Newcastle, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 718; Atlas, p. 5, pl. 13, fig. 6; pl. 14, fig. 1.

30070. **Picea harrimani** Knowlton. Types.
30071. Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 152, pl. 22, figs. 3, 4.

30075. **Picea** sp. Knowlton.
30079. Eocene (Tert.). Kukak Bay, Alaska.
30090.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 151, pl. 24, fig. 3; pl. 25, figs. 3, 4; pl. 33, fig. 1.

1782. **Pimelia delicatula** Lesquereux. Types.
1783. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 168, pl. 33, figs. 15, 16.

30871. **Pinoxylon dacotense** Knowlton. Type.
Upper Jurassic? Three miles northwest of Sturgis, South Dakota.

Knowlton in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 420, pl. 179.

1618. **Pinus florissanti** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 138, pl. 21, fig. 13.

5091. **Pinus gracilistrobus** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 676, pl. 80, fig. 12.

4427. **Pinus iddingsii** Knowlton. Type.
Fort Union (Tert.). Gulch northwest of peak west of Dunraven, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 680, pl. 82, figs. 8, 9.

8179. **Pinus lindgrenii** Knowlton. Type.
Pliocene. Snake River Valley near Bernards Ferry, Idaho.

Knowlton, Torreya, I, No. 10, 1901, p. 113, figs. 1, 2.

5157. **Pinus macrolepis** Knowlton. Type.
Miocene (Tert.). Cliff west of Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 679, pl. 80, fig. 11.

69 to 71. **Pinus palæostrobus?** Ettingshausen. Illustrated specimens.
Green River) Tert.). Near Costello's Ranch, Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 83, pl. 7, figs. 25–28, 31.

600. **Pinus quenstedti** Heer. Illustrated specimens.
605. Dakota (Cret.). North of Salina and Fort Harker, Kansas,

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 33, pl. 1, figs. 3, 4.

5923. **Pinus susquaensis** Dawson. Illustrated specimen.
Lakota (Low. Cret.). Cliff north side Pine Creek, near Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 670, pl. 163, fig. 13.

5973a. **Pinus susquaensis** Dawson. Illustrated specimen.
Lakota (Low. Cret.). Cliff on east bank Oak Creek, near Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 670, pl. 163, figs. 11a, 12.

5144. **Pinus wardii** Knowlton. Type.
5152. Miocene (Tert.). Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 679.

3746. **Pinus** sp.? Fontaine.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 269, pl. 36, fig. 11.

7630. **Pinus** sp. Knowlton.
Payette (Miocene). Idaho City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 722, pl. 119, fig. 3.

7594. **Pinus** sp. Knowlton.
7595. Miocene (Tert.). Three miles southeast of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 39, pl. 1, figs. 3, 4.

30073. **Pinus** sp.? Knowlton.
30074. Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 151, pl. 23, fig. 2; pl. 24, fig. 1.

3378. **Pinus** sp.? Fontaine (seed).
Potomac (Low. Cret.). Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 272, pl. 170, fig. 4.

72. **Pinus** sp. Lesquereux (scale of cone).
Green River (Tert.). Near Costello's Ranch, Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 84, pl. 7, fig. 32.

301. **Pisonia racemosa** Lesquereux. Types.
322. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 400; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 209, pl. 35, fig. 4.

539 to 543. **Pistia corrugata** Lesquereux. Illustrated specimens.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 103, pl. 61, figs. 1, 3–6, 11.

30868. **Pityoxylon aldersoni** Knowlton. Type.
Miocene (Tert.). Head of Crystal Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, 1899, p. 763, pls. 106, 109, 112, 113, 118, figs. 3, 4; pl. 119, fig. 2.

30869. **Pityoxylon amethystinum** Knowlton. Type.
Miocene (Tert.). Head of Crystal Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 764, pls. 107, 108, 114, 115, 118, figs. 1, 2.

30870. **Pityoxylon microporosum brandonianum** Knowlton. Type.
Miocene? (Tert.). Brandon, Vermont.

Knowlton, Bull. Torrey Bot. Club, Nov., 1902, p. 639, pl. 25, figs. 9, 10.

30867. **Pityoxylon pealei** Knowlton. Type.
Miocene (Tert.). Upper Gallatin Basin, Montana.

Knowlton, Bull. Torrey Bot. Club, XXIII, 1896, p. 251, pl. 271.

7002. **Planera crenata** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 81, pl. 57, fig. 3.

234. **Planera longifolia** Lesquereux. Type.
Green River (Tert.). Costello's Ranch, Florissant, Colorado.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 37; ibid., 1873 [1874], p. 413; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 189, pl. 27, fig. 4.

1713 to 1724. **Planera longifolia** Lesquereux. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 161, pl. 29, figs. 1–13.

1725 to 1737. **Planera longifolia myricæfolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 161, pl. 29, figs. 15–27.

237. **Planera microphylla** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 55; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 81, pl. 33, fig. 4.

7037. 7038. **Planera nervosa** Newberry. Types.
Green River (Tert.). Green River, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 508; Mon. XXXV, U. S. Geol. Surv., 1898, p. 82, pl. 67, figs. 2, 3.

236. **Planera ungeri** Ettingshausen. Illustrated specimen.
Green River (Tert.). Costello's Ranch, near Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 190, pl. 27, fig. 7.

7039 to 7041. **Planera variabilis** Newberry. Types.
Green River (Tert.). Green River, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 508; Mon. XXXV, U. S. Geol. Surv., 1898, p. 83, pl. 66, figs. 5, 6.

241. **Platanus aceroides** Goeppert. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 184, pl. 25, fig. 4.

2535. **Platanus aceroides** Goeppert. Illustrated specimen.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 19, pl. 5, fig. 7.

7079 to 7083. **Platanus aspera** Newberry. Types.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 509; Mon. XXXV, U. S. Geol. Surv., 1898, p. 102, pl. 42, figs. 1–3; pl. 54, fig. 5, pl. 59, fig. 3.

4088 to 4092. **Platanus basilobata** Ward. Types.
Fort Union (Tert.). Seven Mile Creek, and Clear Creek, near Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv.; 1887, p. 35, pl. 17, fig. 1; pl. 18, figs. 1–3; pl. 19, fig. 1.

2736. **Platanus cissoides** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 75, pl. 61, fig. 3.

6001. **Platanus cissoides** Lesquereux. Illustrated specimen.
Dakota (Cret.). Evans's quarry on Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 706, pl. 171, fig. 2.

193. **Platanus cordata** Knowlton. Type.
Laramie? (Cret.). Carbon, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 169.

See Quercus platania.

238. **Platanus guillelmæ** Goeppert. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 183, pl. 25, fig. 1.

239. 240. **Platanus guillelmæ** Goeppert. Illustrated specimens.
Denver? (Cret.). Washakie Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 183, pl. 25, figs. 2, 3.

4096. **Platanus guillelmæ** Goeppert. Illustrated specimen.
Fort Union (Tert.). Left bank of Yellowstone, Burn's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 37, pl. 20, fig. 1.

4238. **Platanus guillelmæ** Goeppert. Illustrated specimen.
Miocene (Tert.). Fossil Forest Ridge, bed No. 1, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 727, pl. 96, fig. 1.

4430. **Platanus guillelmæ** Goeppert. Illustrated specimen.
Fort Union (Tert.). East bank of Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 727, pl. 97, fig. 5.

6963. **Platanus haydenii** Newberry. Illustrated specimen.
Eocene? (Tert.). La Bontes Creek, Converse County, Wyoming.

Newberry, U. S. Geol. Surv. Terr., Ills. Tert. and Cret. Plants, 1878, pl. 21; Mon. XXXV, U. S. Geol. Surv., 1898, p. 103, pl. 38.

6991. **Platanus haydenii** Newberry. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, Dawson County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 103, pl. 56, fig. 3.

242. **Platanus haydenii?** Newberry. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, pl. 25, fig. 6.

631. **Platanus heerii** Lesquereux. Illustrated specimens.
632. Dakota (Cret.). Bluffs of the Salina River, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 70, pl. 8, fig. 1; pl. 9, fig. 1.

4094. **Platanus heerii** Lesquereux. Illustrated specimens.
4095. Laramie (Cret.). Black Buttes, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 34, pl. 15, figs. 3, 4.

654. **Platanus latiloba** Newberry. Type.
Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 23; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 2, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 105, pl. 1, fig. 4.

321. **Platanus marginata** (Lesquereux) Heer. See Viburnum mar-
322. ginatum.

4360. **Platanus montana** Knowlton. Types.
5131. Miocene (Tert.). East slope of hill three-fourths of a mile south from Yancey's, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 728, pl. 96, figs. 2, 3.

6891. **Platanus newberryana** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 72, pl. 8, fig 2.

251. **Platanus nobilis** Newberry. Type.
Fort Union (Tert.). Near Fort Clark, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 67; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 17, fig. 1; Mon. XXXV, U. S. Geol. Surv., 1898, p. 106, pl. 34.

4093. **Platanus nobilis** Newberry. Illustrated specimen.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 35, pl. 16, fig. 1.

6964. **Platanus nobilis** Newberry. Illustrated specimen.
Fort Union (Tert.). Fort Clark, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 106, pl. 50, fig. 1.

629. **Platanus obtusiloba** Lesquereux. Types.
630. Dakota (Cret.). Beatrice, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 97; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 69, pl. 7, figs. 3, 4.

8562. **Platanus occidentalis** Linnæus. Supplemental types.
8579. Interglacial (Pleistocene). Morgantown, West Virginia.
8580.
8596 to 8598.

Knowlton in I. C. White, Amer. Geol., XVIII, 1896, p. 371.

327. **Platanus platanoides** (Lesquereux) Knowlton. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 171.

See Viburnum platanoides.

628. **Platanus primæva** Lesquereux. Illustrated specimen.
Dakota (Cret.). Lancaster County, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 69, pl. 7, fig. 2.

50001. **Platanus primæva** Lesquereux. Illustrated specimens.
50002. Dakota (Cret.) Ten miles northeast of Delphos, Kansas.
50004.
50005.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 72, pl. 8, figs. 7–8a; pl. 10, fig. 1.

2730. **Platanus primæva integrifolia** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 74, pl. 49, fig. 4.

7000. **Platanus raynoldsii** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 69; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 18; Mon. XXXV, U. S. Geol. Surv., 1898, p. 109, pl. 35.

247 to 249. **Platanus raynoldsii** Newberry. Illustrated specimens.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 185, pl. 27, figs. 1–3.

4097. **Platanus raynoldsii** Newberry. Illustrated specimens.
4098. Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 37, pl. 20, figs. 2, 3.

243. **Platanus raynoldsii integrifolia** Lesquereux. Type.
244. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 185, pl. 26, figs. 4, 5.

656. **Platanus recurvata** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 71, pl. 10, fig. 3.

=Sassafras (Araliopsis) recurvatum.

245. **Platanus rhomboidea** Lesquereux. Types
246. Denver (Cret.). Golden, Colorado.

Lesqureeux, Rept. Geol. Surv. Terr., VII, Pt. II, 1878, p. 186, pl. 26, figs. 6, 7.

326. **Platanus rhomboidea** Lesquereux. See Viburnum anceps.

30872. **Platinium haydeni** Felix. Illustrated specimen.
Miocene (Tert.). Near head of Crystal Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 767, pl. 120, figs. 3–5.

3237. **Platypterigium densinerve** Fontaine. Type.
3330. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 169, pl. 30, fig. 8; pl. 31, figs. 1, 4; pl. 32, figs. 1, 2; pl. 33, fig. 1; pl. 34, fig. 1; pl. 35, figs. 1, 2.

3410. **Platypterigium rogersianum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 171, pl. 31, fig. 2; pl. 33, fig. 2; pl. 34, fig. 2.

25255. **Plinthiotheca angularis** (Lesquereux) David White. Types.
25256. Anthracite (Penn.). Railroad cut near Port Griffith, Luzerne County, Pennsylvania.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 101.

See Lepidocystis angularis.

485. **Podogonium americanum** Lesquereux. Types.
581. Laramie (Cret.). Black Buttes, Wyoming.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 298, pl. 59, fig. 5; pl. 63, fig. 2.

=Cassia podogonioides.

3740. **Podozamites acutifolius** Fontaine? Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus. XVI, 1893, p. 266, pl. 36, fig. 7.

8226. **Podozamites? carolinensis** Fontaine. Type.
Triassic. Lockville? Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 298, pl. 42, fig. 4.

3264. **Podozamites distantinervis** Fontaine. Type.
3889. Potomac (Low. Cret.). Roadside near Potomac Run; Fred-
3890. ericksburg; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 179, 180, pl. 79, fig. 5; pl. 82, fig. 4; pl. 83, figs. 1, 2, 6, 7; pl. 84, figs. 1, 2, 8, 10, 14, 15; pl. 85, figs. 12, 16.

2540. **Podozamites distantinervis** Fontaine. Illustrated specimens.
2622. Neocomian or Jurassic? Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 165.

See Podozamites latipennis and Zamites alaskana.

8224. **Podozamites emmonsi** Newberry. Illustrated specimens.
8225. Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 297, pl. 42, figs. 1, 2.

30877. **Podozamites emmonsi** Fontaine. Illustrated specimen.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 77, pl. 33, fig. 2.

=Podozamites longifolius.

8360. **Podozamites grandifolius** Fontaine? Illustrated specimen.
(2437.) Jurassic? Cape Lisburne, Alaska.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 167, pl. 44, fig. 1.

See Baiera palmata.

2540. **Podozamites latipennis** Heer. Illustrated specimen.
Neocomian (Cret.). Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 31, pl. 16, figs. 2, 3.

=Podozamites distantinervis.

30877. **Podozamites longifolius** Emmons. Illustrated specimens.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 294.

See Podozamites emmonsi.

8222. **Podozamites longifolius** Emmons. Illustrated specimens.
8223. Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 294, pls. 40, 41.

603. **Podozamites oblongus** Lesquereux. Types.
604. Dakota (Cret.). North of Salina, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 28, pl. 1, figs. 10, 11.

3265. **Podozamites pedicellatus** Fontaine. Type.
3891. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 180, pl. 76, fig. 1; pl. 78, fig. 7; pl. 82, fig. 5.

3263. **Podozamites subfalcatus** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 179, pl. 68, fig. 6; pl. 170, fig. 9.

30949. **Podozamites tenuistriatus** (Rogers) Fontaine. Illustrated specimen.
Triassic. Richmond Coal Field, Virginia.
Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 78, pl. 42, fig. 2.

3741. **Podozamites** sp.? Fontaine.
Trinity (Low. Cret.). Glenrose, Texas.
Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 267, pl. 36, fig. 8.

3226. **Polypodium dentatum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 105, pl. 22, figs. 4, 5.

3452. **Polypodium fadyenioides** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run, Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 104, pl. 16, figs. 4, 5.

625. **Populites cyclophylla** (Heer) Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Decatur, Nebraska.
Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 93; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 59, pl. 24, fig. 4.

6895. **Populites cyclophylla** (Heer) Lesquereux. See Populus
6896. cyclophylla.

626. **Populites elegans** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.
Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 93; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 59, pl. 3, fig. 3.

2760. **Populites elegans** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 47, pl. 46, fig. 5; pl. 47, figs. 2, 3.

6927. **Populites elegans** Lesquereux. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.
Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 54, pl. 8, fig. 3.

6917. **Populites flabellata** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.
Lesquereux, Amer. Jour. Sci., XLVI, 1868, p. 94.
=Grewiopsis flabellata.
See Grewiopsis haydenii.

50135. **Populites hyperborea** Heer. Illustrated specimen.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 44, pl. 8, fig. 1.

627. **Populites lancastriensis** Lesquereux. Type.
Dakota (Cret.). Near Lancaster, Nebraska.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 58, pl. 3, fig. 1.
See Populus lancastriensis.

624. **Populites litigiosus** (Heer) Lesquereux. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 46.

See Populus litigiosa.

2770. **Populites litigiosus** (Heer) Lesquereux.
50118. Illustrated specimens.
50139. Dakota (Cret.). Near Fort Harker, and ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 46, pl. 7, fig. 7; pl. 8, fig. 5; pl. 47, fig. 1.

633. **Populites ovata** Lesquereux. Type.
633b. Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci. (2), XLVI, 1868, p. 94.

=Ampelophyllum ovatum.
See Celtis? ovata.

645a. **Populites quadrangularis** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Amer. Journ. Sci. (2), XLVI, 1868, p. 94.

=Hamamelites quadrangularis.
See Alnites quadrangularis.

690 to 692. **Populites salisburiæfolius** Lesquereux. Types.
Dakota (Cret.). Lancaster County, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 94.

=Cissites salisburiæfolius.
See Sassafras obtusum.

3390. **Populophyllum crassinerve** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 312, pl. 158, fig. 4.

3440. **Populophyllum hederæforme** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 311, pl. 166, fig. 3.

3403. **Populophyllum reniforme** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 311, pl. 155, fig. 9; pl. 156, fig. 3.

224. **Populus acerifolia** Newberry. Types.
225. Fort Union (Tert.). Fort Union, North Dakota.
551. Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 65; U. S. Geol.
552. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 13, figs. 5–8;
6968. Mon. XXXV, U. S. Geol. Surv., 1898, p. 37, pl. 28, figs. 5–8.

4051. **Populus amblyrhyncha** Ward. Types.
4060. Fort Union (Tert.). Seven Mile Creek, below Glendive,
5362. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 20, pl. 6, figs. 2, 5, 7.

4086. **Populus anomala** Ward. Type.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p, 23, pl. 8, fig. 7.

208. **Populus arctica** Heer. Illustrated specimens.
210 Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rep. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 178, pl. 23, figs. 3, 5.

212 to 216. **Populus arctica** Heer. See Populus decipiens.

5389. **Populus auriculata** Ward. Type.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 356, pl. 4, fig. 4.

4403. **Populus balsamoides** Goeppert. Illustrated specimen.
Miocene (Tert.). Cliff west of Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 696, pl. 86, fig. 1.

579. **Populus cordata** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 60; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 14, fig. 6; Mon. XXXV, U. S. Geol. Surv., 1898, p. 38, pl. 29, fig. 6.

623. **Populus(?) cordifolia** Newberry. Type.
6894. Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 18; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 3, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 40, pl. 3, fig. 7.

4087. **Populus craspedodroma** Ward. Type.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 21, pl. 8, fig. 3.

223. **Populus cuneata** Newberry. Types.
6981. Fort Union (Tert.). Yellowstone River, Montana, or Fort
6982. Union, Buford County, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 64; Mon. XXXV, U. S. Geol. Surv., 1898, p. 41, pl. 28, figs. 2, 3.

See Populus nervosa elongata.

6997. **Populus cuneata** Newberry. Illustrated specimen.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 41, pl. 29, fig. 7.

See Populus nebrascensis.

4061. **Populus cuneata** Newberry. Illustrated specimens.
4065. Fort Union (Tert.). Clear Creek, fifteen miles above Glen-
4067. dive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 19, pl. 5, figs. 1, 2, 3.

4062 **Populus cuneata** Newberry. Illustrated specimens.
to Fort Union (Tert.). Seven Mile Creek, below Glendive,
4064. Montana.
4066.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 19, pl. 4. figs. 5–8.

2023. **Populus cuneata** Newberry. Illustrated specimen.
Fort Union (Tert.). Bad Lands, Dakota.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 225, pl. 46a, fig. 5.

226 **Populus cuneata** Newberry. Illustrated specimens.
to Fort Union (Tert.). Yellowstone River, Montana, or Fort
228. Union, Buford County, North Dakota.
6970.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 14, figs. 1–4.

=Populus rotundifolia.

6895. **Populus cyclophylla** Heer. Types.
6896. Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Heer, Proc. Acad. Nat. Sci. Phila., 1858, p. 266.—Newberry, U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 3, figs. 3, 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 41, pl. 3, figs. 3, 4.

=Populites cyclophylla.

6916. **Populus cyclophylla** Heer. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 41, pl. 4, fig. 1.

=Populites cyclophylla.
See Populus litigiosa.

4072 **Populus daphnogenoides** Ward. Types.
to Fort Union (Tert.). Seven Mile Creek, below Glendive,
4074. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 20, pl. 7, figs. 4–6.

4251. **Populus daphnogenoides** Ward. Illustrated specimens.
4342. Fort Union (Tert.). Top of bluff, Yellowstone River, one-
half mile below mouth of Elk Creek, Yellowstone
National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 696, pl. 84, fig. 2.

624a. **Populus ? debeyana** Heer. Illustrated specimens.
6897. Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 17; U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 5, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 42, pl. 5, fig. 7.

See Juglans? debeyana.

212 to 216. **Populus decipiens** Lesquereux. Illustrated specimens.
Laramie? (Cret.). Carbon, and Creston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 179, pl. 23, figs. 7–11.

=Populus arctica.

621. 622. **Populus elliptica** Newberry. Types.
Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 16; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 3, figs. 1, 2; Mon. XXXV, U. S. Geol. Surv., 1898, p. 43, pl. 3, figs. 1, 2.

8293 to 8296. **Populus eotremuloides** Knowlton. Types.
Payette, Miocene (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 725, pl. 100, figs. 1, 2; pl. 101, figs. 1, 2.

6941. **Populus flabellum** Newberry. Type.
Puget Sound (Cret.). Chuckanut, Bellingham Bay, Washington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 524; Mon. XXXV, U. S. Geol. Surv., 1898, p. 44, pl. 20, fig. 4.

6996. **Populus genetrix** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 64; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 20, fig. 1; Mon. XXXV, U. S. Geol. Surv., 1898, p. 44, pl. 27, fig. 1.

2022. **Populus glandulifera** Heer. Illustrated specimen.
Fort Union (Tert.). Bad Lands, Dakota.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 226, pl. 46a, figs. 3, 4.

4076 to 4079. **Populus glandulifera** Heer. Illustrated specimens.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 19, pl. 4, figs. 1–4.

4343. **Populus glandulifera** Heer. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 694, pl. 84, fig. 1.

4075. **Populus grewiopsis** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 23, pl. 9, fig. 1.

2723. **Populus harkeriana** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 44, pl. 46, fig. 4.

4085. **Populus hederoides** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 22, pl. 8, fig. 5.

1689 to 1696. 1707. 1712. **Populus heerii** Saporta. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 157, pl. 30, figs. 1–8; pl. 31, figs. 6, 11.

4083. **Populus inæqualis** Ward. Type.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 24, pl. 9, fig. 2.

627. **Populus lancastriensis** Lesquereux. Type.
Dakota (Cret.). Near Lancaster, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 93.

= Populites lancastriensis.

200. **Populus latior cordifolia** Heer. Illustrated specimen.
Laramie? (Cret.). Washakie Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv., VII, Pt. II, 1878, p. 172, pl. 22, fig. 8.

8292. **Populus lindgreni** Knowlton. Type.
Payette, Miocene (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 725, pl. 100, fig. 3.

8512. **Populus lindgreni** Knowlton. Illustrated specimen.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 29, pl. 2, fig. 1.

624. **Populus litigiosa** Heer. Illustrated specimen.
Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 3, fig. 6; Mon. XXXV, U. S. Geol. Surv., 1898, p. 45, pl. 3, fig. 6.

= Populites litigiosus.

6916. **Populus litigiosa** Heer. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Newberry, U. S. Geol. Surv., Ills. Cret. and Tert. Plants, 1878, pl. 4, fig. 1.

= Populites cyclophylla.

3585. **Populus meedsii** Knowlton. Type.
Fort Union (Tert.). Glendive, Montana.

Knowlton, Proc. U. S. Nat. Mus., XVI, 1893, p. 34, pl. 1, figs. 1, 2.

205. **Populus melanaria** Heer. Illustrated specimen.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 173, pl. 64, fig. 5.

6892. **Populus microphylla** Newberry. Type.
Dakota (Cret.). Blackbird Hill, near Decatur, Nebraska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 46, pl. 3, fig. 5.

217. **Populus monodon** Lesquereux. Types.
218. Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Ann. Rept. U. S. Geol. Surv., 1871, Suppl., 1873, p. 375, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 180, pl. 24, figs. 1, 2.

219. **Populus mutabilis ovalis** Heer. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 177, pl. 24, fig. 3.

6997. **Populus nebrascensis** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, U. S. Geol. Surv., Terr. Ills. Cret. and Tert. Plants, 1878, pl. 14, fig. 7.

=Populus cuneata.

6974. **Populus nervosa** Newberry. Types.
6998. Fort Union, (Tert.). Fort Union, Buford County, North Dakota, and Tongue River, Custer County, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 61; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 12, figs. 2, 3; Mon. XXXV, U. S. Geol. Surv., 1898, p. 48, pl. 27, fig. 2, 3.

223. **Populus nervosa elongata** Newberry. Types.
6981. Fort Union (Tert.). Yellowstone River, Montana, and
6982. Buford County, North Dakota.
6999.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 62; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, pl. 13, figs. 1–3 (2, 3=P. cuneata); Mon. XXXV, U. S. Geol. Surv., 1898, p. 49, pl. 28, fig. 1.

=Populus cuneata (part).

8297. **Populus occidentalis** Knowlton. Type.
Payette, Miocene (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 727, pl. 99, fig. 14.

1684 **Populus oxyphylla** Saporta. Illustrated specimens.
to Green River (Tert.). Florissant, Colorado.
1686.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 159, pl. 38, figs. 9–11.

4080. **Populus oxyrhyncha** Ward. Type.
4081. Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 21, pl. 8, figs. 1, 2.

7053 **Populus polymorpha** Newberry. Types.
to Upper Eocene (Tert.). Bridge Creek, Crook County,
7056. Oregon.
7061.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 50, pl. 49, figs. 8, 9; pl. 58, fig. 4.

7049. **Populus polymorpha** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 50, pl. 46, fig. 4.

=Quercus oregoniana.

7051. **Populus polymorpha** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 50, pl. 49, fig. 7.

=Quercus pseudo-alnus.

7047. 7052. 7060. **Populus polymorpha** Newberry. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 50, pl. 46, fig. 3; pl. 47, fig. 4; pl. 49, fig. 4.

=Betula heteromorpha.

5386 to 5388. **Populus potomacensis** Ward. Types.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 356, pl. 4, figs. 1–3.

5253. 5254. **Populus? problematica** Knowlton. Type.
Laramie (Cret.). Head of Fir Canyon, eight miles east of Bozeman, Montana.

Knowlton, Bull. No. 105, U. S. Geol. Surv., 1894, p. 51, pl. 6 figs. 5, 6.

201 to 203. **Populus richardsoni** Heer. Illustrated specimens.
Green River (Tert.). Elko Station, Nevada.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 177, pl. 22, figs. 10–12.

4082. **Populus richardsoni** Heer. Illustrated specimens.
Fort Union (Tert.). Burns's Ranch, below Glendive Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 23, pl. 8, fig. 6.

226 to 228. 6970. **Populus rotundifolia** Newberry. Types.
Fort Union (Tert.). Fort Union, or mouth of the Yellowstone River, North Dakota.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 506; Mon. XXXV, U. S. Geol. Surv., 1898, p. 51, pl. 29, figs. 1–4.

See Populus cuneata.

5231. **Populus russelli** Knowlton. Type.
Miocene? (Tert.). Ellensburg, Washington.

Knowlton, Bull. No. 108, U. S. Geol. Surv., 1893, p. 104.

229. **Populus smilacifolia** Newberry. Type.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 66; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, pl. 14, fig. 5; Mon. XXXV, U. S. Geol. Surv., 1898, p. 53, pl. 29, fig. 5.

4068 to 4071. **Populus speciosa** Ward. Types.
Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 20, pl. 5, figs. 4–7.

4250. 5125. **Populus speciosa** Ward. Illustrated specimens.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 694, pl. 84, fig. 3.

220. 221. **Populus subrotundata** Lesquereux. Illustrated specimen.
Laramie? (Cret.). Rock Creek, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 173, pl. 24, figs. 6, 8.

222. **Populus ungeri** Lesquereux. Type.
Denver? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 175, pl. 24, fig. 5.

4084. **Populus whitei** Ward. Type.
Fort Union (Tert.). Burns's Ranch, left bank Yellowstone River, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 22, pl. 8, fig. 4.

4338. 4339. **Populus xantholithensis** Knowlton. Types.
Fort Union (Tert.). Top of bluff, Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 695, pl. 85, figs. 1, 2.

204. **Populus zaddachi** Heer. Illustrated specimens.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr. VII, Pt. II, 1878, p. 176, pl. 22, fig. 13.

1687. **Populus zaddachi** Heer. Illustrated specimen.
Green River (Tert.) Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 158, pl. 31, fig. 8.

7578. **Populus zaddachi?** Heer. Illustrated specimen.
Miocene (Tert.) Left bank of the Columbia River, near the mouth of Moffats Creek, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 40, pl. 1, fig. 11.

7647. **Populus** sp. Knowlton.
Montana (Cret.). North Fork Dutton Creek, Albany County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 37, pl. 7, fig. 5.

8515. (2541.) **Porana bendirei** (Ward) Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 16, pl. 8, fig. 4.

=Hydrangea bendirei.
See Marsilea bendirei.

8564. 8570 to 8573. **Potamogeton robbinsii** Oakes. Supplemental types.
Interglacial (Pleistocene). Morgantown, West Virginia.

Knowlton in I. C. White, Amer. Geol., XVIII, 1896, p. 371.

1625. 1626. **Potamogeton verticillatus** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 142, pl. 23, fig. 5.

5399 to 5401. **Preissites wardii** Knowlton. Types.
Fort Union (Tert.) Burns's Ranch, below Glendive, Montana.

Knowlton, Bull. Torrey Bot. Club, XXI, 1894, p. 458, pl. 219, figs. 1–3.

3196. **Proteæphyllum dentatum** Fontaine. Type.
Potomac (Low Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 286, pl. 156, fig. 7; pl. 172, figs. 1, 4; pl. 173, figs. 12, 14.

3267. **Proteæphyllum ellipticum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 285, 286, pl. 142, figs. 1, 2.

3244. **Proteæphyllum oblongifolium** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 284, pl. 139, fig. 5; pl. 140, figs. 1, 2.

3243. **Proteæphyllum orbiculare** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 283, pl. 139, fig. 4.

3258. **Proteæphyllum ovatum** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 285, pl. 141, fig. 1.

3291. 3915. 3916. **Proteæphyllum reniforme** Fontaine. Types.
Potomac (Low. Cret.). Fredericksburg; 72d milepost, near Brooke; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 282, 283, pl. 139, fig. 3; pl. 156, fig. 4; pl. 160, figs. 1, 2.

5390. 5391. **Proteæphyllum reniforme** Fontaine. Illustrated specimens.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 560, pl. 4, figs. 5, 6.

3283. **Proteæphyllum tenuinerve** Fontaine. Types.
3901. Potomac (Low. Cret.). Fishing hut above Dutch Gap
3918. Canal; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 286, pl. 150, fig. 13; pl. 156, fig. 2.

666. **Proteoides acuta** Heer. Illustrated specimen.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 86, pl. 15, fig. 3.

665. **Proteoides daphnogenoides** Heer. Illustrated specimens.
6900. Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 85, pl. 15, figs. 1, 2.

2778. **Proteoides lancifolius** Heer. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 90, pl. 50, fig. 8.

7007. **Protoficus inæqualis** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 512; Mon. XXXV, U. S. Geol. Surv., 1898, p. 89, pl. 58, fig. 2.

5255. **Protophyllocladus lanceolatus** (Knowlton) Berry. Type.
Laramie (Cret.). Head of Fir Canyon, eight miles east of Bozeman, Montana.

Berry, Bull. Torrey Bot. Club, XXX, 1903, p. 441.

See Thinnfeldia lanceolata.

838. **Protophyllocladus polymorphus** (Lesquereux) Berry. Type.
Livingston and Montana (Cret.). Spring Canyon and Bozeman Coal Field, Montana.

Berry, Bull. Torrey Bot. Club, XXX, 1903, p. 442.

See Salisburia polymorpha and Thinnfeldia montana.

5256 to 5259. **Protophyllocladus polymorphus** (Lesquereux) Berry. See Thinnfeldia polymorpha.

590. 50108 to 50110. **Protophyllocladus subintegrifolius** (Lesquereux) Berry.
See Thinnfeldia subintegrifolia and Phyllocladus subintegrifolius.

50017. **Protophyllum crassum** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 193, pl. 65, fig. 4.

727 to 729. **Protophyllum crednerioides** Lesquereux. Illustrated specimens.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 90, pl. 2, figs. 1–3.

50018. **Protophyllum crenatum** Knowlton. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Knowlton in Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 190, pl. 65, fig. 7.

50063. **Protophyllum denticulatum** Lesquereux. Type.
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 193, pl. 36, fig. 9.

2832. **Protophyllum haydenii** Lesquereux. Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 192, pls. 43, 44.

733. **Protophyllum leconteanum** Lesquereux.
Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 103, pl. 26, fig. 1.

2785. **Protophyllum leconteanum** Lesquereux.
Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 187, pl. 40, fig. 1.

735. **Protophyllum minus** Lesquereux. Type.
Dakota (Cret.). Salina, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 104, pl. 19, fig. 2.

6926. **Protophyllum minus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 132, pl. 9, fig. 3.

737. **Protophyllum minus** Lesquereux. Illustrated specimen.
Dakota (Cret.). Fort Larned, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 89, pl. 4, fig. 6.

2852. **Protophyllum? mudgii** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 106, pl. 18, fig. 3.

See Quercus mudgii.

2817. **Protophyllum multinerve** Lesquereux. Illustrated specimens.
50143. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 191, pl. 43, fig. 2; pl. 65, fig. 1.

2720. **Protophyllum præstans** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 188, pls. 41, 42.

3115. **Protophyllum pterospermifolium** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 195, pl. 59, fig. 1.

731. **Protophyllum rugosum** Lesquereux. Illustrated specimens.
736. Dakota (Cret.). South of Fort Harker, and near Fort Larned, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 105, pl. 17, fig. 2, pl. 19, fig. 3. .

730. **Protophyllum sternbergii** Lesquereux. Types.
732. Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 101, pl. 16; pl. 18, fig. 2.

See Pterospermites sternbergii.

6913. **Protophyllum sternbergii** Lesquereux. Illustrated specimens.
6914. Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 133, pls. 10, 11.

8514a. **Prunus merriami** Knowlton. Types.
8514b. Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, pp. 67, 68, pl. 11, fig. 2.

7108 to 7110. **Prunus variabilis** Newberry. Types.
Eocene (Tert.). Cook Inlet, Alaska.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 509; Mon. XXXV U. S. Geol. Surv., 1898, p. 112, pl. 52, figs. 3–5.

8208. **Pseudodanæopsis plana** (Emmons) Fontaine. Type.
Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 284.

See Strangerites planus and Pseudodanæopsis reticulata.

3488. **Pseudodanæopsis reticulata** Fontaine. Types.
30956 to 30959. Triassic. Carbon Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 59, pl. 30, figs. 1–4.

8208. **Pseudodanæopsis reticulata** Fontaine.
Illustrated specimen.
Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 116, pl. 54, fig. 3.

=Pseudodanæopsis plana.
See Strangerites planus.

13401. **Pseudopecopteris anceps** Lesquereux.
13403. Illustrated specimens.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 7, pl. 38, fig. 3; Text, I, 1880, p. 207.

13733. **Pseudopecopteris andræana** (Roehl) Lesquereux.
13734. Supplemental types.
Kanawha, Pottsville (Penn.). Coalmont and Blacksburg, West Virginia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 754.

15008. **Pseudopecopteris decipiens** Lesquereux.
Illustrated specimen.
Pottsville (Penn.). Helena, Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 9, pl. 52, fig. 10; Text, I, 1880, p. 214.

13565. **Pseudopecopteris dimorpha** Lesquereux.
13566. Illustrated specimens.
Anthracite (Penn.). Orchard mine, Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 750, pl. 98, figs. 4, 4a.

13737. **Pseudopecopteris hispida** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 755, pl. 98, fig. 3.

13639. **Pseudopecopteris irregularis** (Sternberg) Lesquereux.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 52, figs. 1, 2; Text, I, 1880, p. 211.

6433. **Pseudopecopteris macilenta** (Lindley and Hutton) Lesquereux.
6434. Illustrated specimens.
McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 472, pl. 67, figs. 10, 11.

14807. **Pseudopecopteris macilenta** (Lindley and Hutton) Lesquereux. Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 219; III, 1884, p. 754, pl. 98, fig. 2.

13902. **Pseudopecopteris mazoniana** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 32, fig. 1; Text, I, 1880, p. 190.

14776. **Pseudopecopteris nummularia** Gutbier.
14886. Illustrated specimens.
14891. Pottsville (Penn.). Cannelton and Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 751, pl. 103, figs. 1, 1a, 2, 2a.

5627. **Pseudopecopteris obtusiloba** (Brongniart) Lesquereux.
5635. Illustrated specimens.
5717. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry
5718. County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 24, pl. 7, figs. 1–3; pl. 8.

13607. **Pseudopecopteris obtusiloba** (Brongniart) Lesquereux.
Supplemental type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P' Text, III, 1884, pp. 753, 754.

13618. **Pseudopecopteris obtusiloba dilatata** (Lindley and Hutton) Lesquereux. Supplemental type.
Pottsville (Penn.). Wyoming Mine, near Upper Creek, Kanawha County, West Virginia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 753.

13547. **Pseudopecopteris pluckneti** (Schlotheim) Lesquereux.
13548. Illustrated specimens.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 6, pl. 35, figs. 7, 7a; Text, I, 1880, p. 199.

13508. **Pseudopecopteris sillimanni** (Brongniart) Lesquereux.
Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 37, fig. 3; Text, I, 1880, p. 206.

13531. **Pseudopecopteris sphenopteroides** Lesquereux. Types.
13532. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.
Cherokee (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 21, figs. 3, 4; Text, I, 1880, p. 139.

5618. **Pseudopecopteris** sp. David White.
5667. Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 29, pl. 7, figs. 4, 5.

5402. **Psilophyton grandis** Penhallow. Types.
5403. Hamilton, Erian (Dev.). West Hurley, Ulster County,
5408. New York.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 111, pl. 12, fig. 12a; pl. 13, fig. 12b; pl. 14, fig. 12c.

46. **Psilotum inerme** Newberry. Types.
47. Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 38; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 7, fig. 2; pl 8, fig. 3.

=Cabomba inermis.

979. **Ptenostrobus nebrascensis** Lesquereux. Type.
Dakota (Cret.). Bluffs of the Missouri River, eight miles northeast of Winnebago Village, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 114, pl. 24, fig. 1.

50078. **Pteris dakotensis** Lesquereux. Types.
50079. Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 24, pl. 1, figs. 2, 3.

23. **Pteris erosa** Lesquereux. Illustrated specimen.
Denver? (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 53, pl. 4, fig. 8.

=Asplenium erosum.

17. **Pteris gardneri** Lesquereux. Type.
Arapahoe (Cret.). Sand Creek, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1873 [1874], p. 393.

=Gymnogramma gardneri.

589. **Pteris nebraskana?** Heer. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 46, pl. 29, fig. 5.

7098. **Pteris pennæformis** Heer. Illustrated specimen.
Eocene? (Tert.). Currant Creek, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 7, pl. 48, fig. 5.

18. **Pteris pseudopennæformis** Lesquereux. Illustrated specimen.
Denver (Cret.). Henrys Forks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 52, pl. 4, fig. 3.

6962. **Pteris russelli** Newberry. Type.
Laramie (Cret.). Vermejo Canyon, Colfax County, New Mexico.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 503; Mon. XXXV, U. S. Geol. Surv., 1898, p. 7, pl. 61, fig. 1.

20 to 22. **Pteris subsimplex** Lesquereux. Illustrated specimens.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 52, pl. 4, figs. 5, 6, 7.

=Asplenium subsimplex.

476. **Pterocarya americana** Lesquereux. Type.
Green River (Tert.). Middle Park? Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873, [1874], p. 417; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 290, pl. 58, fig. 3.

30884. **Pterophyllum affine** Nathorst. Illustrated specimen.
Triassic. Midlothian, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 66, pl. 32, fig. 3.

8216. **Pterophyllum daleanum** Ward. Type.
Triassic. Lockville, Chatham County, North Carolina.

Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 290.

See Pterophyllum pectinatum and Pterozamites pectinatus.

8217. **Pterophyllum decussatum** (Emmons) Fontaine. Type.
Triassic. Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 111, pl. 51, fig. 2.

=Ctenophyllum braunianum angustum.
See Pterozamites decussatus.

592. **Pterophyllum haydenii** Lesquereux. Types.
598. Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Amer. Jour. Sci., XLVI, 1868, p. 91.

592=Pterophyllum? haydenii.
598=Abietites ernestinæ.

592. **Pterophyllum? haydenii** Lesquereux. Type.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 49, pl. 1, fig. 6.

3499. **Pterophyllum inæquale** Fontaine. Types.
30976. Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 64, pl. 36, fig. 1.

8216. **Pterophyllum pectinatum** Fontaine. Type.
Triassic. Lockville, Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 112, pl. 53, fig. 4.

=Pterophyllum daleanum.
See Pterozamites pectinatus.

8221. **Pterophyllum robustum** Emmons. Type.
Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 122, fig. 91.

=Ctenophyllum robustum.

8219. **Pterophyllum spatulatum** (Emmons) Fontaine. Type.
Triassic. Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 114, pl. 53, fig. 6.

=Ctenophyllum braunianum angustum.

30081. **Pterospermites alaskana** Knowlton. Types.
30089. Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 156, pl. 26, fig. 2; pl. 32.

4201. **Pterospermites cordatus** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 93, pl. 41, fig. 4.

577. **Pterospermites cupanioides** (Newberry) Knowlton. See Phyllites cupanioides and P. venosus.

4205. 5343. **Pterospermites cupanioides** (Newberry) Knowlton. See Pterospermites whitei.

3580. **Pterospermites cupanioides** (Newberry) Knowlton. Illustrated specimen.
Fort Union (Tert.). Glendive, Montana.

Knowlton, Proc. U. S. Nat. Mus., XVI, 1893, p. 35, pl. 2, fig. 1.

7122. 7123. **Pterospermites dentatus** Heer. Illustrated specimens.
Eocene? (Tert.). Yukon River, Alaska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 133, pl. 53, figs. 1, 2.

4370. **Pterospermites haguei** Knowlton. Type.
Miocene (Tert.). Fossil Forest Ridge, upper stratum, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 742, pl. 99, fig. 4.

2742. **Pterospermites longeacuminatus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 186, pl. 59, fig 3.

30088. **Pterospermites magnifolia** Knowlton. Type.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 156, pl. 31.

4202 to 4204. **Pterospermites minor** Ward. Types.
Fort Union (Tert.). Burns's Ranch, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 95, pl. 42, figs. 1–3.

2813. **Pterospermites modestus** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 186, pl. 58, fig. 5.

730. 732. **Pterospermites sternbergii** Lesquereux. Types.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 425.

=Protophyllum sternbergii.

4205. 5343. **Pterospermites whitei** Ward. Type.
Fort Union (Tert.). Burn's Ranch, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 94, pl. 41, figs. 5, 6.

=Pterospermites cupanioides.

8217. **Pterozamites decussatus** Emmons. Type.
Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties North Carolina, 1856, p. 330, pl. 3, fig. 1; Amer. Geology, VI, 1857, p. 117, pl. 3, fig. 1.

=Ctenophyllum braunianum angustum.
See Pterophyllum decussatum.

8220. **Pterozamites linearis** Emmons. Type.
Triassic. House's quarry, Haw River, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 120, fig. 87.

=Ctenophyllum lineare.

8216. **Pterozamites pectinatus** Emmons. Type.
Triassic. Lockville, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 117, fig. 84.

=Pterophyllum daleanum.
See Pterophyllum pectinatum.

8219. **Pterozamites spatulatus** Emmons. Types.
Triassic. House's quarry, Haw River, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 120, fig. 88.

=Ctenophyllum braunianum angustum.

19281. **Ptilophyton lineare** (Lesquereux) Dawson.
19282. Illustrated specimen.
Mississippian. Rushville, Ohio.

Dawson, Erian and Upp. Sil. Plants, Pt. II, 1882, p. 123, pl. 1 (?), fig. 5.

30874. **Quercinium lamarense** Knowlton. Type.
Miocene (Tert.). Specimen Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 771, pl. 118, fig. 5; pl. 120, fig. 2; pl. 121, figs. 1, 2.

3458. **Quercophyllum grossedentatum** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 307, pl. 156, fig. 9.

3409. **Quercophyllum tenuinerve** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 308, pl. 149, figs. 6, 7.

7376. **Quercophyllum wyomingense** Fontaine. Type.
Lakota (Low. Cret.). Cliff on north side Pine Creek, two miles west of Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 688, pl. 169, fig. 6.

178. **Quercus acrodon** Lesquereux. Type.
Montana (Cret.). Near Rock Creek, Laramie Plains, Wyoming.

Lesquereux, Amer. Journ. Sci. (2), XLV, 1868, p. 205; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 158, pl. 19, fig. 13.

=Quercus lesquereuxiana.

7125. **Quercus affinis** (Newberry) Knowlton. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 45.

See Fraxinus affinis.

617. **Quercus anceps** Lesquereux. Type.
Dakota (Cret.). Salt Creek, ten miles below Lancaster, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 96.

=Diospyros ambigua.
See Diospyros anceps.

191. **Quercus angustiloba** Al. Braun. Illustrated specimens.
192. Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 161, pl. 21, figs. 4, 5.

7596. **Quercus applegatei** Knowlton. Types.
7597. Miocene (Tert.). Three miles southeast of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 42, pl. 1, figs. 6, 7.

4131. **Quercus aquamara** (Ward) Knowlton. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 189.

See Hedera aquamara.

7702. **Quercus argentum** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 215, pl. 30, fig. 12.

186. **Quercus attenuata** (Goeppert) Lesquereux.
Supplemental type.
Arapahoe (Cret.). Sand Creek, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 398.

=Quercus viburnifolia.

6947 **Quercus banksiæfolia** Newberry. Type.
to Puget Sound (Cret.). Chuckanut, Bellingham Bay, Wash-
6949. ington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 522; Mon. XXXV, U. S. Geol. Surv., 1898, p. 69, pl. 18, figs. 2, 3, 5.

4129. **Quercus bicornis** Ward. Type.
Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 24, pl. 9, fig. 3.

7598. **Quercus breweri** Lesquereux. Illustrated specimen.
Miocene (Tert.). Three miles southeast of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 42, pl. 2, fig. 3.

4130. **Quercus carbonensis** Ward. Type.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 25, pl. 9, fig. 6.

4122. **Quercus carbonensis** Ward. See Dryophyllum basidentatum.

1575. **Quercus castaneopsis** Lesquereux. Type.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 155, pl. 28, fig. 10.

7044. **Quercus castanioides** Newberry. Type.
Green River (Tert.). Green River, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 506; Mon. XXXV, U. S. Geol. Surv., 1898, p. 70, pl. 65, fig. 6.

6992. **Quercus castanopsis** Newberry. Type.
Fort Union (Tert.). Yellowstone River (Dawson County?), Montana.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 505; Mon. XXXV, U. S. Geol. Surv., 1898, p. 71, pl. 56, fig. 4.

190. **Quercus chlorophylla** Unger. Illustrated specimen.
Laramie? (Cret.). Spring (Rocky) Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 151, pl. 21, fig. 3.

=Quercus ? chlorophylloides.

See Quercus eucalyptifolia.

190. **Quercus ? chlorophylloides** Knowlton. Type.
Laramie (Cret.). Spring Canyon, near Fort Ellis, Montana.

Knowlton, Bull. 152, U. S. Geol. Surv., 1898, p. 190.

See Quercus chlorophylla and Quercus eucalyptifolia.

180. **Quercus cleburni** Lesquereux. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 154, pl. 20, fig. 2.

7048. **Quercus consimilis** Newberry. Types.
7050. Miocene (Tert.). Bridge Creek, Crook County, Oregon.
7057. Newberry, Proc. U. S, Nat. Mus., V, 1883, p. 505; Mon. XXXV,
7058. U. S. Geol. Surv., 1898, p. 71, pl. 43, figs. 3, 4, 7, 8; pl. 44, fig. 2.
7063.
7070.

8305. **Quercus consimilis** Newberry. Illustrated specimen.
Payette (Miocene). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 729, pl. 102, fig. 6.

5065. **Quercus consimilis?** Newberry. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 704, pl. 87, fig. 6.

6944 to 6946. **Quercus coriacea** Newberry. Types.
Puget Sound (Cret.). Chuckanut, Bellingham Bay, Washington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 521; Mon. XXXV, U. S. Geol. Surv., 1898, p. 73, pl. 19, figs. 1–3.

2329. **Quercus crossii** Lesquereux. Type.
Denver? (Cret.). Silver Cliff, Colorado.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 39, pl. 2, figs. 5, 6.

4381. **Quercus culveri** Knowlton. Type.
Fort Union (Tert.). Top of bluff, Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 708, pl. 87, fig. 5.

4128. **Quercus doljensis** Pilar. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 25, pl. 9, fig. 4.

See Rhus pseudo-meriani.

177. **Quercus drymeja** Unger. Illustrated specimen.
Green River (Tert.). Costello's Ranch, near Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 157, pl. 19, fig. 14.

1572. 1573. **Quercus drymeja** Unger. Illustrated specimens.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 154, pl. 28, fig. 12.

7006. **Quercus dubia** Newberry. Type.
Fort Union (Tert.). Tongue River, Custer County, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 73, pl. 37, fig. 5.

See Phyllites cupanioides.

8508. **Quercus duriuscula** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 50, pl. 8, fig. 2.

1677. **Quercus elæna** Unger. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 155, pl. 28, fig. 13.

168. **Quercus elkoana** Lesquereux. Type.
Green River (Tert.). Elko Station, Nevada.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 413.

=Carpinus grandis.

6950. **Quercus elliptica** Newberry. Types.
6951. Puget Sound (Cret.). Chuckanut, Bellingham Bay, Washington.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 74, pl. 18, figs. 1, 3.

183. **Quercus ellisiana** Lesquereux. See Quercus pealei.

181. **Quercus ellisiana** Lesquereux. Illustrated specimens.
182. Livingston (Cret.). Six miles above Spring Canyon, near
184. Fort Ellis, Montana.
185.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 155, pl. 20, figs. 4, 5, 7, 8.

5200. **Quercus ellisiana** Lesquereux. Illustrated specimen.
Laramie (Cret.). Mount Evarts, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 659, pl. 77, fig. 6.

1175. **Quercus? ellsworthianus** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 65, pl. 6, fig. 7.

50136. **Quercus? ellsworthianus** Lesquereux. See Laurophyllum ellsworthianum.

190. **Quercus eucalyptifolia** Ettingshausen. Type.
Livingston (Cret.). Spring Canyon, near Fort Ellis, Montana.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 16; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 26.

=Quercus? chlorophylloides.
See Quercus chlorophylla.

893. **Quercus? fraxinifolia** Lesquereux. Type.
Livingston (Cret.). Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 154, pl. 20, fig. 3.

4373. **Quercus furcinervis americana** Knowlton.
5171. Illustrated specimens.
5217. Miocene (Tert.). Fossil Forest, Bed No. 5, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 705, pl. 88, fig. 5.

179. **Quercus godeti?** Heer. Illustrated specimen.
Livingston (Cret.). Six miles above Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 153, pl. 20, fig. 1.

6952. **Quercus gracilis** Newberry. Type.
Montana (Cret.). Point of Rocks, Sweetwater County, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 504; Mon. XXXV, U. S. Geol. Surv., 1898, p. 75, pl. 67, fig. 4.

7103. **Quercus groenlandica** Heer. Illustrated specimen.
7104. Eocene (Tert.). Cook Inlet, Alaska.
7107.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 75, pl. 51, fig. 3; pl. 54, figs. 1, 2.

4361. **Quercus grossidentata** Knowlton. Types.
5165. Miocene (Tert.). Bed No. 5, Fossil Forest Ridge, Yellow-
5166. stone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 704, pl. 87, fig. 7.

187. **Quercus haidingeri** Ettingshausen. Illustrated specimens.
188. Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 156, pl. 20, figs. 9, 10.

175. **Quercus haydeni** Lesquereux. Type.
Laramie? (Cret.). Rock Creek, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 157, pl. 19, fig. 10.

618. **Quercus hexagona** Lesquereux. Type.
Dakota (Cret.). Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 95; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 64, pl. 5, fig. 8.

50084. **Quercus hexagona** Lesquereux. Illustrated specimen.
Dakota (Cret.). Delphos, Ottawa County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 56, pl. 7, fig. 5.

616. **Quercus holmesii** Lesquereux. See Dryophyllum (Quercus) holmesii and Dryophyllum (Quercus) salicifolium.

8504. **Quercus horniana** Lesquereux. Type.
(2556.) Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 17.—Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 52, pl. 8, fig. 1.

50086. **Quercus (Dryophyllum) hosiana** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 57, pl. 3, fig. 14.

8306. **Quercus idahoensis** Knowlton. Type.
Payette, Miocene (Tert.) Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 729, pl. 102, fig. 4.

403 to 405. **Quercus ilicoides ?** (Heer) Lesquereux. Supplemental types.
Green River (Tert.) Sage Creek, Montana.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Montana, etc., 1871 [1872], p. 291.

=Ilex dissimilis.

2328. **Quercus imbricaria fossilis** Lesquereux. Type.
Pleistocene. Bridgeton, New Jersey.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 39.

645. **Quercus kanseana** (Lesquereux) Knowlton.
698. Type and illustrated specimen.
Dakota (Cret.). Fort Harker and western Kansas.

Knowlton, Bull, No. 152, U. S. Geol. Surv., 1898, p. 194.

See Alnus kanseanus and Hamamelites kanseana.

613. **Quercus (Dryophyllum) latifolia** Lesquereux. Type.
Dakota (Cret.). Salina, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 340, pl. 6, fig. 1; Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 37, pl. 4, fig. 1 (as Dryophyllum (Quercus) latifolium); Mon. XVII, U. S. Geol. Surv., 1892, p. 58.

614. **Quercus (Dryophyllum) latifolia.** See Dryophyllum latifolium.

6967. **Quercus laurifolia** Newberry. Type.

Fort Union (Tert.). Fort Berthold, Garfield County, North Dakota.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 505; Mon. XXXV, U. S. Geol. Surv., 1898, p. 76, pl. 60, fig. 3.

178. **Quercus lesquereuxiana** Knowlton. Type.
Montana (Cret.). Near Rock Creek, Laramie Plains, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 194.

See Quercus acrodon.

7667. **Quercus lesquereuxiana** Knowlton. Illustrated specimen.
Montana (Cret.). Dunn's Ranch, six miles east of Harpers Station, Wyoming.

Knowlton, Bull. No. 163, 1900, p. 39, pl. 7, fig. 1.

4376. **Quercus? magnifolia** Knowlton. Type.
Fort Union (Tert.). Top of bluff, Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 704, pl. 88, fig. 1.

1679. **Quercus mediterranea** Unger. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 153, pl. 28, fig. 9.

8505 to 8507. **Quercus merriami** Knowlton. Types.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, and twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 49, pl. 6, fig. 7; pl. 7, figs. 4, 5.

2852. **Quercus mudgii** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Montana, etc., 1871 [1872], p. 302.

=Protophyllum? mudgii.

189. **Quercus negundoides** Lesquereux. Type.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 292; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 161, pl. 21, fig. 2.

171. **Quercus neriifolia** Al. Braun. Illustrated specimen.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 150, pl. 19, fig. 5.

=Apocynophyllum lesquereuxii.

172. **Quercus neriifolia** Al. Braun. Illustrated specimen.
Green River (Tert.). Near Florissant, Colorado.

Lesquereux Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 150, pl. 19, fig. 4.

=Apocynophyllum pealei.

1574. **Quercus neriifolia** Al. Braun. Illustrated specimen.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 155, pl. 31, fig. 12.

7049. 8484. **Quercus oregoniana** Knowlton. Types.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 47, pl. 6, figs. 2, 3.

See Populus polymorpha.

7570. **Quercus pacifica** Knowlton. Types.
7571. Miocene (Tert.). Five miles north of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 43, pl. 1, figs. 9, 10.

7059. **Quercus paucidentata** Newberry. Type.
Miocene (Tert.). Bridge Creek, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 505; Mon. XXXV, U. S. Geol. Surv., 1898, p. 76, pl. 43, fig. 1.

8307. **Quercus payettensis** Knowlton. Type.
Payette (Miocene). Jackass Creek, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 730, pl. 102, fig. 9.

183. **Quercus pealei** Lesquereux. Type.
Livingston (Cret.). Six miles above Spring Canyon, Gallatin County, Montana.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr. 1871 [1872],p. 297; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 156, pl. 20, fig. 6.

=Quercus ellisiana.

193. **Quercus platania** (Heer) Lesquereux. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 160, pl. 21, fig. 1.

=Platanus cordata.

377. **Quercus platania rotundifolia** Lesquereux. Types.
378. Livingston (Cret.). Above Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 405.

=Dombeyopsis platanoides.

615. **Quercus primordialis** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Amer. Journ. Sci. XLVI, 1868, p. 95; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 64, pl. 5, fig. 7.

=See Dryophyllum primordiale.

7051. **Quercus pseudo-alnus** Ettingshausen. Supplemental type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 46.

See Populus polymorpha.

2565. **Quercus pseudo-lyrata** Lesquereux. Illustrated specimen.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 17, pl. 10, fig. 1.

2566 to 2570. **Quercus pseudo-lyrata** Lesquereux. Illustrated specimens. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 48.

See Quercus pseudo-lyrata vars. acutiloba, brevifolia, obtusiloba, and latifolia.

2566. **Quercus pseudo-lyrata acutiloba** Lesquereux. Type. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 17, pl. 11, fig. 1.

=Quercus pseudo-lyrata.

2567. **Quercus pseudo-lyrata angustiloba** Lesquereux. Type. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p 7, pl. 11, fig. 2.

=Quercus pseudo-lyrata.

2568. **Quercus pseudo-lyrata brevifolia** Lesquereux. Type. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 18, pl. 10, fig. 2.

=Quercus pseudo-lyrata.

2570. **Quercus pseudo-lyrata latifolia** Lesquereux. Type. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 18, pl. 12, fig. 1.

=Quercus pseudo-lyrata.

2569. **Quercus pseudo-lyrata obtusiloba** Lesquereux. Type. Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 18, pl. 10, fig. 3.

=Quercus pseudo-lyrata.

2571. **Quercus saffordii** Lesquereux. Illustrated specimen. Eocene (Tert.). Wickliffe, Ballard County, Kentucky.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 13, pl. 5, figs. 1–3.

7058a. **Quercus simplex** Newberry. Type. Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Proc. U. S. Nat. Mus., V, 1886, p. 505; Mon. XXXV, U. S. Geol. Surv., 1898, p. 78, pl. 43, fig. 6.

8301 to 8304. **Quercus simulata** Knowlton. Types. Payette, Miocene (Tert.). Two miles southeast of Marsh Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 728, pl. 101, figs. 3, 4; pl. 102, figs. 1, 2.

50083. **Quercus spurio-ilex** Knowlton. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Knowlton in Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 53, pl. 48, fig. 3.

173. **Quercus stramineus** Lesquereux. Types.
174. Laramie (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 151, pl. 19, figs. 6, 7.

7575. **Quercus subsinuata** Knowlton. Type.
Miocene (Tert.). Five miles north of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 41, pl. 2, fig. 5.

6966. **Quercus sullyii** Newberry. Type.
Fort Union (Tert.). Fort Berthold, Garfield County, North Dakota.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 506; Mon. XXXV, U. S. Geol. Surv., 1898, p. 79, pl. 60, fig. 2.

2757. **Quercus suspecta** Lesquereux. Types.
50080. Dakota (Cret.). Ellsworth County, and near Fort Harker,
50081. Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 52, pl. 47, fig. 7; pl. 48, figs. 1, 2.

890. **Quercus triangularis** Goeppert. Supplemental type.
Laramie (Cret.). Golden, Colorado.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873,] p. 377.

=Quercus viburnifolia.

7675. **Quercus turneri** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 214, pl. 30, fig. 21.

8509. **Quercus ursina** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 51, pl. 7, fig. 3.

186. **Quercus viburnifolia** Lesquereux. Types.
890. Laramie (Cret.). Sand Creek and Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 159, pl. 20, figs. 11, 12.

See Quercus attenuata and Quercus triangularis.

50082. **Quercus wardiana** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 53, pl. 7, fig. 1.

5999. **Quercus wardiana ?** Lesquereux. Illustrated specimens.
6005. Dakota (Cret.). Evans's quarry on Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 704, pl. 170, figs. 2, 3.

4281. **Quercus weedii** Knowlton. Types.
4402. Miocene (Tert.). Fossil Forest Ridge, Bed No. 6, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 705, pl. 87, fig. 4.

4374. **Quercus yanceyi** Knowlton. Type.
Miocene (Tert.). Mountain back of Yancey's, Fossil Forest Station, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 707, pl. 89, fig. 2.

7580. **Quercus ?** sp. Knowlton.
Miocene (Tert.). One mile east of Murphy's Springs, southeast of Ashland, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 41, pl. 1, fig. 8.

8555. **Quercus** sp. Knowlton.
Clarno beds, Eocene (Tert.). Road crossing Cherry Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 43, pl. 8, fig. 4.

19608 to 19610. **Rachiopteris squamosa** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 838, 839.

30790. **Retiphycus hexagonale** Ulrich. Type.
Yakutat series (Lias). Pogibshi Island, opposite Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 139, pl. 18, fig. 5.

26370. **Rhabdocarpos abnormalis** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv., Pa., Rept. Prog. P, Text, III, 1884, p. 818, pl. 110, figs. 48, 49.

26630. **Rhabdocarpos amygdalæformis** Gœppert and Berger. Illustrated specimen.
Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 85, fig. 27; Text, II, 1880, p. 581.

26756. **Rhabdocarpos apiculatus** Lesquereux. Type.
Anthracite (Penn.). Stanton Mine, Wilkesbarre, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 819, pl. 110, fig. 50.

26368. **Rhabdocarpos arcuatus** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 583.

26297. **Rhabdocarpos bockschianus** Goeppert and Berger. Supplemental type.
Walden (Penn.). Rockwood, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 844, 845.

26268. **Rhabdocarpos clavatus** (Sternberg) Geinitz. Illustrated specimen.
Pottsville (Penn.). Helena, Alabama.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, fig. 20; Text, II, 1880, p. 581.

=Trigonocarpum helenæ.

26568. **Rhabdocarpos coronatus** (Lesquereux Mss.) David White. Type.
Le Roy (Penn.). Ottawa, Kansas.

David White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 109.

26136. **Rhabdocarpos danai** Foster. Supplemental type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 580.

26116. **Rhabdocarpos inflatus** Lesquereux. Type.
26117. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 815, pl. 110, fig. 36.

26028. **Rhabdocarpos jacksonianum** Lesquereux.
26029. Illustrated specimens.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, II, 1889, p. 867.

25830 to 25832. **Rhabdocarpos laticostatus** Lesquereux. Types.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 815, pl. 110, figs. 34, 35.

26762 to 26765. **Rhabdocarpos mamillatus** Lesquereux. Types.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Geol. Rept. Ill., IV, 1870, p. 461, pl. 31, figs. 12–15; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 816, pl. 110, figs. 39–42.

20122. **Rhabdocarpos multistriatus** (Presl) Lesquereux. Illustrated specimen.
Pottsville? (Penn.?) Rock Island, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 578, pl. 85, fig. 23.

26796. **Rhabdocarpos pachytesta** Lesquereux. Types.
26798. Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 816, pl. 110, figs. 37, 38.

26330. **Rhabdocarpos subglobosus** Lesquereux. Types.
26331. Anthracite (Penn.). Butler dam, near Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 817, pl. 110, figs. 43–45, 62.

26458. **Rhabdopcarpos tenax** Lesquereux. Types.
26459. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pl. 111, figs. 25, 26.

26362 to 26365. **Rhabdocarpos** sp. Lesquereux.
Pottsville (Penn.). Pratt mines and Dolomite, Alabama.

Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, 1889, II, 1889, p. 869.

26345 to 26351. **Rhabdocarpos** sp. Lesquereux.
Pottsville (Penn.). Dolomite and Cordova, Alabama.

Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, 1889, II, 1889, p. 869.

Rhabdocarpus. See Rhabdocarpos.

19566 to 19568. **Rhacophyllum acuminatum** (Lesquereux) David White. Types.
Le Roy (Penn.). Garnett, Kansas.

David White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 108.

=Aphlebia acuminata.

19470. **Rhacophyllum clarkii** Lesquereux. Type.
Pennsylvanian. Rhode Island.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, pp. 319, 320.

19469. **Rhacophyllum corallum** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P Atlas, 1879, pl. 57, figs. 4, 4a; Text, I, 1880, p. 317.

19435. **Rhacophyllum expansum** Lesquereux. Type.
Anthracite (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 57, fig. 6; Text, I, 1880, p. 323.

19468. **Rhacophyllum filiforme** (Gutbier) Schimper. Supplemental type.
Le Roy (Penn.). Garnett, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 838.

=Aphlebia filiformis.

19442. **Rhacophyllum fucoideum** Lesquereux. Types.
19443. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 58, figs. 6, 7; Text, I, 1880, p. 325.

19445. **Rhacophyllum hamulosum** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 58, fig. 3; Text, I, 1880, p. 321.

19465. **Rhacophyllum membranaceum** Lesquereux. Types.
19466. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 58, fig. 1; Text, I, 1880, pp. 312, 313.

19436. **Rhacophyllum spinosum** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 320.

=Aphlebia spinosa.

19431. **Rhacophyllum strongii** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Geol. Surv. Ill., IV, 1870, p. 417, pl. 18, fig. 1; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 325.

19453. **Rhacophyllum trichoideum** Lesquereux. Types.
19454. Anthracite (Penn.). Oakwood Colliery, Wilkesbarre, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 322.

=Aphlebia trichoidea.

19414. **Rhacophyllum truncatum** Lesquereux. Type.
Catskill (Dev.). Narrows above Caxton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 9, pl. 50, fig. 7; Text, I, 1880, p. 311.

30875. **Rhamnacinium radiatum** Felix. Illustrated specimen.
Miocene (Tert.). Near head of Crystal Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 769, pl. 118, figs. 6, 7; pl. 119, fig. 1.

6985. **Rhamnites concinnus** Newberry. Type.
(564.) Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 50; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, fig. 7; Mon. XXXV, U. S. Geol. Surv., 1898, p. 118, pl. 33, fig. 7.

6984. **Rhamnites concinnus** Newberry. Illustrated specimen.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 118, pl. 33, fig. 8.

See Viburnum asperum.

447. **Rhamnites intermedius** Lesquereux. Type.
Green River (Tert.). Washakie Station, near Bridgers Pass, Carbon County, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 286; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 282, pl. 54, fig. 3.

432. **Rhamnus alaternoides** Heer. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 278, pl. 52, fig. 11.

439. **Rhamnus cleburni** Lesquereux. Illustrated specimens.
440. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 280, pl. 53, figs. 1, 3.

2580. **Rhamnus cleburni** Lesquereux var.
Eocene? (Tert.). Cherry Creek, Wasco County, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 20.

1558. **Rhamnus deformatus** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 126, pl. 20, fig. 6.

6958. **Rhamnus elegans** Newberry. Type.
Laramie (Cret.). Belmont, Colorado.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 49; Mon. XXXV, U. S. Geol. Surv., 1898, p. 117, pl. 50, fig. 2.

356a. **Rhamnus goldianus** Lesquereux. Illustrated specimens.
441 Denver (Cret.). Golden, Colorado.
to
443. Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 281, pl. 53, figs. 2, 4–8.
445.

5321. **Rhamnus goldianus** Lesquereux. See Berchemia multinervis.

433. **Rhamnus inæqualis** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 279, pl. 52, fig. 16.

= Diospyros brachysepala.

436. **Rhamnus rectinervis** Heer. Illustrated specimens.
437. Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 279, pl. 52, figs. 12, 13.

938. **Rhamnus rectinervis** Heer. Illustrated specimen.
Upper Cretaceous. Anthracite Creek, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 279, pl. 52, fig. 15.

450. **Rhamnus rossmässleri** Unger. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 283, pl. 54, fig. 4.

=Juglans rhamnoides.

50106. **Rhamnus similis** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, four miles southwest of Brookville, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 168, pl. 35, figs. 12, 13.

748. **Rhamnus tenax** Lesquereux. Type.
Dakota (Cret.). Southern Kansas.

Lesquereux, Amer. Journ. Sci., LXVI, 1868, p. 101; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 109, pl. 21, fig. 4.

25016. **Rhizomorpha sigillariæ** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Proc. Am. Phil. Soc., 1877, p. 174; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 1, pl. B, figs. 11, 11a; Text, I, 1880, p. 3.

1871 to 1874. **Rhus acuminata** Lesquereux. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 194, pl. 42, figs. 14–17.

2582. **Rhus bendirei** Lesquereux. Types.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 15, pl. 9, fig. 2.

=Juglans oregoniana (part).

1887. **Rhus cassioides** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 193, pl. 41, fig. 11.

1642. **Rhus? drymeja** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 416.

=Myrica drymeja.
See Callicoma microphylla.

477 to 479. **Rhus evansii** Lesquereux. Types.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 293; 1872 [1873], p. 402; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 291, pl. 50, fig. 4; pl. 58, figs. 5–9.

3764. **Rhus frigida** Knowlton. Type.
Eocene (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 227, pl. 9, fig. 6.

1890 to 1892. **Rhus hilliæ** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 194, pl. 41, figs. 12, 14, 15.

530. 531. **Rhus membranacea** Lesquereux. Types.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 292, pl. 64, figs. 6, 7.

7587. 7587a. 7588. 7588a. **Rhus mixta** Lesquereux. Illustrated specimens.
Miocene (Tert.). Comstock, Douglas County, Oregon.

Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 49, pl. 3, figs. 2, 3; pl. 6, figs. 2, 3.

560. 561. **Rhus? nervosa** Newberry. Types.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 53; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, figs. 3, 5; Mon. XXXV, U. S. Geol. Surv., 1898, p. 114, pl. 33, figs. 3, 5.

7677. **Rhus? nevadensis** Knowlton. Type.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 218, pl. 30, fig. 15.

7637. 8311. **Rhus payettensis** Knowlton. Types.
Payette, Miocene (Tert.). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 733, pl. 101, figs. 6, 7.

2691. **Rhus powelliana** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 155, pl. 56, figs. 4, 5.

481. **Rhus pseudo-meriani** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 293, pl. 58, fig. 11.

=Quercus doljensis.

358 to 360. **Rhus rosæfolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 293, pl. 42, figs. 7–9.

See Weinmannia rosæfolia.

1882. 1883. **Rhus subrhomboidalis** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 195, pl. 41, figs. 16, 17.

50325. **Rhus trifolioides** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 196.

3081. **Rhus uddeni** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 154, pl. 57, fig. 2.

188a. **Rhus vexans** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 195 pl. 41, fig. 20.

8550. **Rhus** sp. Knowlton.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 70, pl. 14, fig. 6.

3236. **Rogersia angustifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 288, pl. 143, fig. 2; pl. 149, figs. 4, 8; pl. 150, figs. 2–7.

3227. **Rogersia longifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg; Kankeys, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 287, 288, pl. 139, fig. 6; pl. 144, fig. 2; pl. 150, fig. 1; pl. 159, figs. 1, 2.

1912. **Rosa hilliæ** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 199, pl. 40, fig. 17.

3. **Rosellinites lapideus** (Lesquereux) Knowlton. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 204.

See Spheria lapidea.

8533. **Rulac cratægifolia** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 77, pl, 16, fig. 7.

115. **Sabal campbelli** Newberry. Types.
6943. Puget Sound (Cret.). Chuckanut, Bellingham Bay, Washington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 515; Mon. XXXV, 1898, p. 27, pl. 21, figs. 1, 2.

6989. **Sabal campbelli** Newberry. Illustrated specimen.
Fort Union (Tert.). Yellowstone River (Dawson County?), Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 41; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 10.

=Sabal grandifolia.

6957. **Sabal grandifolia** Newberry. Types.
6989. Laramie (Cret.). Fishers Peak, Las Animas County,
6990. Colorado.
7008. Fort Union (Tert.). Tongue River, Custer County, and Yellowstone River, Montana.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 28, pl. 25; pl. 63, fig. 5; pl. 64, figs. 2, 2a.

See Sabal campbelli.

6937. **Sabal imperialis** Dawson. Illustrated specimen.
Puget Sound (Cret.). Nanaimo, Vancouver Island, British Columbia.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 30, pl. 16, figs. 6, 6a.

7024 to 7026. **Sabal powelli** Newberry. Types.
Green River (Tert.). Green River, Wyoming.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 504; Mon. XXXV, U. S. Geol. Surv., 1898, p. 30, pl. 63, fig. 6; pl. 64, figs. 1, 1a.

107. **Sabalites fructifer** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 114, pl. 11, fig. 3.

108. **Sabalites grayanus** Lesquereux. Illustrated specimens.
109. Montana (Cret.). Point of Rocks, Wyoming.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 112, pl. 12, figs. 1, 2.

3295. **Sagenopteris elliptica** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run; Kankeys, Virginia; Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 149, pl. 27, figs. 9, 11–17.

8213. **Sagenopteris emmonsi** Fontaine. Illustrated specimens.
8214. Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 286, pl. 39, figs. 1–3.

3397. **Sagenopteris latifolia** Fontaine. Type.
3782. Potomac (Low. Cret.). Near Telegraph Station (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 148, pl. 27, fig. 10.

4007. **Sagenopteris mantelli** (Dunker) Schenk. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 233, pl. 65, fig. 32.

See Glossozamites klipsteini.

3348. **Sagenopteris virginiensis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 150, pl. 138, fig. 13; pl. 139, fig. 1.

4009. **Sagenopteris?** sp. Fontaine.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1905, p. 238, pl. 65, fig. 46.

5384. **Sagittaria victor-masoni** Ward. Type.
Potomac (Low. Cret.). White House Bluff, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 354, pl. 3, fig. 5.

2310. **Sagittaria** sp. Lesquereux.
Eocene? (Tert.). Sitka, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 37.

3354. **Saliciphyllum ellipticum** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 302, 303, pl. 150, fig. 8.

3380. **Saliciphyllum longifolium** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 302, pl. 150, fig. 12.

838. **Salisburia polymorpha** Lesquereux. Illustrated specimen.
Montana (Cret.). Spring Canyon, near Fort Ellis, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 86, pl. 60, fig. 41.

=Protophyllocladus polymorphus.
See Thinnfeldia montana.

1682. **Salix amygdalæfolia** Lesquereux. Types.
1683. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 156, pl. 31, figs. 1, 2.

199. **Salix angusta** Al. Braun. Illustrated specimen.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 168, pl. 22, fig. 4.

8298. **Salix angusta** Al. Braun. Illustrated specimen.
Payette (Miocene). Idaho City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 727, pl. 99, fig. 12.

7681. **Salix angusta?** Al. Braun. Illustrated specimen.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 212, pl. 30, fig. 22.

7023. **Salix angusta?** Al. Braun. Illustrated specimen.
Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 54, pl. 65, fig. 2.

610. **Salix cuneata** Newberry. Types.
610a. Dakota (Cret.). Mouth of Big Sioux River, Nebraska.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 21; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 1, fig. 1 (as Salix meekii); pl. 2, fig. 2; Mon. XXXV, U. S. Geol. Surv., 1898, p. 55, pl. 2, figs. 1, 2.

8530. **Salix dayana** Knowlton. Type.
8531. Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 31, pl. 2, figs. 9, 10.

50038. **Salix deleta** Lesquereux. Type.
Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 49, pl. 3, fig. 8.

2589. **Salix engelhardti** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 17, pl. 8, fig. 2.

609. **Salix flexuosa** Newberry. Type.
Dakota (Cret.). Mouth of Big Sioux River, Nebraska.

Newberry, Ann. Lyc. Nat. Hist., IX, 1868, p. 21; Ills. Cret. and Tert. Plants, U. S. Geol. Surv., 1878, pl. 1, fig. 4; Mon. XXXV, U. S. Geol. Surv., 1898, p. 56, pl. 2, fig. 4.

=Salix proteæfolia flexuosa.

6928. **Salix flexuosa** Newberry. Illustrated specimens.
6931. Dakota (Cret.). Whetstone Creek, Colfax County, New Mexico.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 56, pl. 13, fig. 4; pl. 14, fig. 1.

6929. **Salix foliosa** Newberry. Types.
6930. Dakota (Cret.). Whetstone Creek, Colfax County, New Mexico.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 57, pl. 13, figs. 5, 6.

197. **Salix integra** Goeppert. Illustrated specimen.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 167, pl. 22, fig. 1.

198. **Salix media** Heer. Illustrated specimen.
Green River (Tert.). Green River, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1898, p. 168, pl. 22, fig. 3.

3761. **Salix minuta** Knowlton. Type.
Eocene? (Tert.). Herendeen Bay, Alaska.
Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 218, pl. 9, fig. 1.

8525. **Salix mixta** Knowlton. Types.
8526. Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 32, pl. 2, figs. 11, 12.

8521 to 8524. **Salix perplexa** Knowlton. Types.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 31, pl. 2, figs. 5–8.

611. **Salix proteæfolia** Lesquereux. Types.
612. Dakota (Cret.). Near Decatur, Nebraska.
Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 94; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 60, pl. 5, figs. 1–3.

609. **Salix proteæfolia flexuosa** Lesquereux. See Salix flexuosa.

50041. **Salix proteæfolia flexuosa** Lesquereux.
50042. Illustrated specimens.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 50, pl. 64, figs. 4, 5.

50043. **Salix proteæfolia lanceolata** Lesquereux.
50047. Illustrated specimen.
50148. Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 50, pl. 64, figs. 6, 7, 8.

50044 to 50046. **Salix proteæfolia linearifolia** Lesquereux.
Illustrated specimen.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 49, pl. 64, figs. 1–3.

50147. **Salix proteæfolia longifolia** Lesquereux.
Illustrated specimens.
Dakota (Cret.). Ellsworth County, Kansas.
Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 50, pl. 64, fig. 9.

8527 to 8529. **Salix pseudoargentea** Knowlton. Types.
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 31, pl. 2, figs. 2–4.

2595. **Salix schimperi** Lesquereux. Type.
Eocene? (Tert.). Cherry Creek, Wasco County, Oregon.
Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 21, pl. 13, fig. 5.

7679. **Salix vaccinifolia** Knowlton. Types.
7680. Esmeralda (Neocene). 3.8 and 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 212, pl. 30, figs. 8, 20.

5077. **Salix varians** Heer. Illustrated specimen.
Miocene (Tert.). Lamar River, between Cache and Calfee creeks, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 697, pl. 85, fig. 3.

7683. **Salix** sp. Knowlton.
Esmeralda (Neocene). 4.5 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 213, pl. 30, fig. 13.

7695. **Salix?** sp. Knowlton.
7696. Esmeralda (Neocene). 3.8 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 213, pl. 30, fig. 14.

50146. **Salix** sp. Lesquereux (fruiting catkin).
Dakota (Cret.). Cloud County, ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 51, pl. 8, fig. 6.

1617. **Salvinia alleni** Lesquereux. Type.
Green River (Tert.). Florissant (South Park), Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, 1883, p. 136, pl. 21, figs. 10, 11.

=Tmesipteris alleni.
See Ophioglossum alleni.

90. **Salvinia cyclophylla** Lesquereux. Type.
Green River (Tert.). Middle Park, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 408; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 64, pl. 5, fig. 10.

=Phyllites cyclophylla.

3257. **Sapindopsis brevifolia** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 300, pl. 153, fig. 4; pl. 155, figs. 1, 7; pl. 163, fig. 3.

3383. **Sapindopsis cordata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 296, pl. 147, fig. 1.

3261. **Sapindopsis elliptica** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 297, pl. 147, fig. 3.

3234. **Sapindopsis magnifolia** Fontaine. Types.
3861. Potomac (Low. Cret.). 72d milepost; bank near Brooke; White House Bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 297, 298, pl. 151, figs. 2, 3; pl. 152, figs. 2, 3; pl. 153, fig. 2; pl. 154, figs. 1, 5; pl. 155, fig. 6.

3235. **Sapindopsis obtusifolia** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 301, 302, pl. 156, fig. 13; pl. 159, figs. 3–6.

3438. **Sapindopsis parvifolia** Fontaine. Type.

Potomac (Low. Cret.). 72d milepost; bank near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 300, pl. 154, fig. 6.

3369. **Sapindopsis tenuinervis** Fontaine. Types.
3909. Potomac (Low. Cret.). 72d milepost; bank near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 301, pl. 153, fig. 1.

3225. **Sapindopsis variabilis** Fontaine. Types.
3859. Potomac (Low. Cret.). 72d milepost; bank near Brooke;
3860. White House Bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 298–300, pl. 151, fig. 1; pl. 152, figs. 1, 4; pl. 153, fig. 3; pl. 154, figs. 2–4; pl. 155, figs. 2–5.

7365. **Sapindopsis variabilis** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff East bank of Oak Creek, two miles below Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept., U. S. Geol. Surv., Pt. II, 1899, p. 690, pl. 169, fig. 9.

570. **Sapindus affinis** Newberry. Type.
Fort Union (Tert.). Mouth of Yellowstone River, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 51; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 24, fig. 1; Mon. XXXV, U. S. Geol. Surv., 1898, p. 116, pl. 30, fig. 1.

4145. **Sapindus affinis** Newberry. Illustrated specimens.
5373. Fort Union (Tert.). Gladstone, North Dakota.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 67, pl. 30, figs. 1, 2.

4321. **Sapindus affinis** Newberry. Illustrated specimens.
4382. Fort Union (Tert.). Yellowstone River, one-half mile
4408. below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 736, pl. 102, figs. 1–3.

4149. **Sapindus alatus** Ward. Type.
4150. Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 68, pl. 31, figs. 3, 4.

390. **Sapindus angustifolius** Lesquereux. Types.
391. Green River (Tert.). Costello's Ranch, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr. 1873 [1874], p. 415, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 265, pl. 49, figs. 2–6.

1834 to 1841. **Sapindus angustifolius** Lesquereux. Illustrated specimens. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 181, pl. 37, figs. 2–7; pl. 39, fig. 12.

2371. **Sapindus angustifolius** Lesquereux. Illustrated specimen. Denver (Cret.). Rhyolite beds, Silver Cliff, Colorado.

Lesquereux, Proc. U. S. Nat. Mus., X, 1877, p. 44, pl. 3, fig. 6.

4146 to 4148. **Sapindus angustifolius** Lesquereux. Illustrated specimens. Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 68, pl. 31, figs. 5–7.

386. **Sapindus caudatus** Lesquereux. Type. Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 264, pl. 48, fig. 6.

396 to 398. **Sapindus coriaceus** Lesquereux. Types. Green River (Tert.). Elko Station, Nevada.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 415; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 265, pl. 49, figs. 12–14.

=Sapotacites copeanus (part).

50121. **Sapindus diversifolius** Lesquereux. Type. Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv. 1891, p. 158, pl. 64, fig. 18.

2604. **Sapindus falsifolius** Al. Braun. Illustrated specimen. Eolignitic (Tert.). Boaz Station, Graves County, Kentucky.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 12, pl. 4., fig. 4.

4141. **Sapindus grandifolius** Ward. Types.
4144. Fort Union (Tert.). Seven Mile Creek, near Glendive,
4170. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 67, pl. 30, figs. 3–5; pl. 31, figs. 1, 2.

4490. **Sapindus grandifolius** Ward. Illustrated specimen.
5051. Fort Union (Tert.). Platanus beds, Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 737, pl. 99, figs. 1, 2.

571. **Sapindus membranaceus** Newberry. Types.
572. Fort Union (Tert.). Mouth of Yellowstone River, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p, 52; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 24, figs. 2, 3; Mon. XXXV, U. S. Geol. Surv., 1898, p. 117, pl. 30, figs. 2, 3.

50119. **Sapindus morrisoni** Lesquereux. Illustrated specimens.
50120. Dakota (Cret.). Pipe Creek, Cloud County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 158, pl. 35, figs. 1, 2.

392 to 395. **Sapindus obtusifolius** Lesquereux. Types.
Green River (Tert.). Eight miles southeast of Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 266, pl. 49, figs. 8–11.

8538. **Sapindus oregonianus** Knowlton. Type.
Mascall beds, Miocene (Tert.). Twelve miles west of Mount Vernon, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 79, pl. 15, fig. 3.

389. **Sapindus stellariæfolius** Lesquereux. Type.
Green River (Tert.). South Park, near Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 264, pl. 49, figs. 1–3, 5.

4364. **Sapindus wardii** Knowlton. Types.
5068. Fort Union and Miocene (Tert.). Fossil Forest Ridge, Bed No. 5, and Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 738, pl. 98, figs. 1, 2, pl. 99, fig. 5.

397. **Sapotacites copeanus** Ettingshausen. Illustrated specimen.
Tertiary. Elko Station, Nevada.

Ettingshausen, Denks. der Math. Nat. Classe der Kaiserlich. Akad. der Wissensch., LXVII, 1883, p. 36; Mem. Geol. Surv. N. S. W., Pal. No. 2 (Tert. Fl. Aust.), 1888, p. 57.

See Sapindus coriaceus.

703. **Sapotacites haydenii** Heer. Illustrated specimens.
974. Dakota (Cret.). Blackbird Hill, Nebraska.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 5, fig. 1; Mon. XXXV, U. S. Geol. Surv., 1898, p. 126, pl. 5, fig. 1.

50067. **Sapotacites** sp.? Lesquereux.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 114, pl. 65, fig. 3.

650a. **Sassafras acutilobum** Lesquereux. Types.
650b. Dakota (Cret.). Hills along Saline River, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 79, pl. 14, figs 1, 2.

650. **Sassafras acutilobum** Lesquereux. Illustrated specimen.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 56, pl. 5, fig. 5.

3362. **Sassafras bilobatum** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 290, pl. 156, fig. 12; pl. 164, fig. 4.

6919. **Sassafras cretaceum** Newberry. Illustrated specimens.
6921 to 6924. Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 98, pl. 7, figs. 1,2; pl. 8, figs. 1–3.

651. **Sassafras (Araliopsis) cretaceum** Newberry. Illustrated specimen.
Dakota (Cret.). South of Fort Harker, on Saline River, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 80, pl. 11, fig. 2.

2688. **Sassafras (Araliopsis) cretaceum grossedentatum** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 101, pl. 51, fig. 5.

3663. **Sassafras cretaceum heterolobum** Fontaine. Type.
3907. Potomac (Low Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 289, 290, pl. 152, fig. 5; pl. 159, fig. 8; pl. 164, fig. 5.

652. **Sassafras (Araliopsis) cretaceum obtusum** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 803, pl. 12, fig. 3.

6925. **Sassafras cretaceum recurvatum** (Lesquereux) Newberry. Illustrated specimen.
Dakota (Cret.). Fort Harker, Kansas.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 99, pl. 9, fig. 2.

687. **Sassafras harkerianum** Lesquereux. Illustrated specimen,
Dakota (Cret.). Smoky Hill Forks, south of Fort Harker. Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 81, pl. 11, fig. 3.

=Cissites harkerianus.

653. **Sassafras mirabile** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 424.

=Sassafras (Araliopsis) mirabile.

653. **Sassafras (Araliopsis) mirabile** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 80, pl. 12, fig. 1.

See Sassafras mirabile.

654. **Sassafras (Araliopsis) mirabile** Lesquereux. See Platanus
6890. latiloba.

648. **Sassafras mudgii** Lesquereux. Illustrated specimen.
649. Dakota (Cret.). Hills along Saline River, near Salina, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 78, pl. 14, figs. 3, 4; pl. 30, fig. 7.

6002. **Sassafras mudgii** Lesquereux. Illustrated specimens.
6004. Dakota (Low. Cret.). Evans's quarry on Minnekahta Creek,
6006. four miles below Hot Springs, South Dakota.

Ward, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 705, pl. 170, figs. 4, 5; pl. 171, fig. 1.

690. **Sassafras obtusum** Lesquereux. Illustrated specimen.
Dakota (Cret.). Lancaster County, Nebraska.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 81, pl. 13, fig. 2.

=Cissites salisburiæfolius.

3906. **Sassafras parvifolium** Fontaine. Type.
Potomac (Low. Cret.). Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 289, pl. 139, fig. 7.

656. **Sassafras (Araliopsis) recurvatum** Lesquereux. Type.
Dakota (Cret.). Fort Harker, Kansas.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 424 (as S. recurvatus); Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 57.

See Platanus recurvata.

655. **Sassafras? subintegrifolium** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 99; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 82, pl. 3, fig. 5.

3485. **Schizoneura planicostata** (Rogers) Fontaine.
30946 Illustrated specimens.
to Triassic. Clover Hill and Carbon Hill, Richmond Coal
30948. Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 14, pl. 1, fig. 1.

3484. **Schizoneura virginiensis** Fontaine. Types.
30942. Triassic. Clover Hill, Richmond Coal Field, Virginia.
30945.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 17, pl. 1, figs. 4–6.

3486. **Schizoneura** sp.? Fontaine.
Triassic. Clover Hill, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 16, pl. 1, fig. 3.

8327. **Schizoneura** sp.? Penhallow.
Genesee Slates, Erian (Upp. Dev.). Near Penn Yan, Yates County, New York.

Penhallow, Proc. U. S. Nat. Mus., XVI, 1893, p. 107, pl. 9, fig. 3.

3368. **Scleropteris dentata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 153, pl. 63, figs. 3, 4.

7355. **Scleropteris distantifolia** Fontaine. Type.
Lakota (Low. Cret.). South Fork of Hay Creek, near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 662, pl. 162, figs. 2, 3.

3319. **Scleropteris elliptica** Fontaine. Types.
3794. Potomac (Low. Cret.). Fredericksburg; lignite deposit near Potomac Run; fishing hut above Dutch Gap Canal; Kankeys; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 151, 152, pl. 28, figs. 2, 4, 6; pl. 29, fig. 1.

3371. **Scleropteris elliptica longifolia** Fontaine. Types.
3414. Potomac (Low. Cret.). Fredericksburg, Virginia.
3969.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 152, pl. 28, fig. 7.

7357. **Scleropteris rotundifolia** Fontaine. Type.
Lakota (Low. Cret.). South Fork of Hay Creek, near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 663, pl. 162, figs. 4, 5.

5376 **Scleropteris vernonensis** Ward. Types.
to Potomac (Low. Cret.). Near mouth of Doag Creek, Mount
5378. Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol Surv., Pt. II, 1895, p. 349, pl. 2, figs. 1–3.

3927. **Scleropteris virginica** Fontaine. Type.
Potomac (Low. Cret.). Red clay banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 152, pl. 28, figs. 3, 5.

2. **Sclerotites rubellus** (Lesquereux) Meschinelli. Type.
Denver (Cret.). Golden, Colorado.

Meschinelli, Syllog. Fung. Foss., 1892, p. 69 [805].

See Sclerotium rubellum.

2. **Sclerotium rubellum** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 35, pl. 1, fig. 2.

=Sclerotites rubellus.

8177. **Selaginella apus** (Linnæus) Springer. Supplemental type.
Interglacial. Lookout Point, Yellowstone National Park.

Knowlton, Plant World, III, Feb., 1900, p. 31.

35. **Selaginella berthoudi** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 46, pl. 5, fig. 12.

91. **Selaginella falcata** Lesquereux. Types.
92. Montana (Cret.). Point of Rocks, Wyoming.

544. 545. 548. Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 365; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 297; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 46, pl. 61, figs. 12–15; pl. 64, figs. 13, 13a.

=Lycopodium lesquereuxiana (part).

62. **Sequoia acuminata** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 80, pl. 7, figs. 15, 16.

87. **Sequoia affinis** Lesquereux. Types.
88. Green River (Tert.). Florissant, Colorado.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 384; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 310; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 75, pl. 65, figs. 1, 2.

=Sequoia langsdorfii.

3254. **Sequoia ambigua** Heer. Illustrated specimens.
3854. 3858. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; river bank above fishing hut; telegraph station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 245, pl. 118, fig. 2; pl. 120, figs. 1–6; pl. 127, fig. 5; pl. 132, fig. 3.

57. **Sequoia angustifolia** Lesquereux. Type.
Green River (Tert.). Elko Station, Nevada.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 372; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 77, pl. 7, fig. 6.

8289. **Sequoia angustifolia?** Lesquereux. Illustrated specimen.
Payette (Miocene). Two miles southeast of Marsh, Boise County, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 722, pl. 99, fig. 4.

75 to 78. **Sequoia biformis** Lesquereux. Types.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 80, pl. 62, figs. 15–18.

=Geinitzia biformis.

4226. **Sequoia biformis** Lesquereux. Illustrated specimens.
5368. 5369. Montana (Cret.). Point of Rocks, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 16, pl. 2, figs. 3–5.

=Geinitzia biformis.

79. 81 **Sequoia brevifolia** Heer. Illustrated specimens.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 79, pl. 61, figs. 26, 27.

593. **Sequoia condita** Lesquereux. Illustrated specimens.
596. Dakota (Cret.). Near Fort Harker, Kansas.
596a. Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 32,
597. pl. 1, figs. 5–7, 9.

6935. **Sequoia cuneata** Newberry. Types.
6936. Puget Sound (Cret.). Nanaimo, Vancouver Island, British Columbia.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 18, pl. 14, figs. 3, 4.

See Taxodium cuneatum.

3251. **Sequoia cycadopsis** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 243, pl. 112, figs. 9–11; pl. 113, figs. 1–3.

3315. **Sequoia densifolia** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 246, pl. 121, fig. 4.

594. **Sequoia formosa** Lesquereux. Type.
Dakota (Cret.). Near Decatur, Nebraska.

Lesquereux, Amer. Journ. Sci., XLVI, 1868, p. 92; Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 50, pl. 1, fig. 9.

7415. **Sequoia gracilis** Heer. Illustrated specimen.
Lakota (Low. Cret.). South side Pine Creek, two and one-half miles above Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 675, pl. 166, fig. 2.

3252. **Sequoia gracilis** Heer. Illustrated specimens.
Potomac. (Low Cret.). 72d milepost, near Brooke; bank near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 247, pl. 126, figs. 3, 4.

595. **Sequoia gracillima** (Lesquereux) Newberry. Type.
Dakota (Cret.). Mouth of Iowa Creek, Kansas.

Newberry, Mon. XXVI, U. S. Geol. Surv., 1895, p. 50.

See Glyptostrobus gracillima.

6932. **Sequoia gracillima** (Lesquereux) Newberry. Illustrated specimen.
Dakota (Cret.). Whetstone Creek, Colfax County, New Mexico.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 19, pl. 14, fig. 6.

59. **Sequoia heerii** Lesquereux. Types.
60. Eocene (Tert.). Sage Creek, Beaverhead County, Montana.

Lesquereux, Ann. Rept. U. S. Geol. Surv., 1871 [1872], p. 290; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 77, pl. 7, figs. 11, 13.

55. **Sequoia langsdorfii** (Brongniart) Heer.
Illustrated specimen.
Fort Union? (Tert.). Yellowstone River, Montana.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 46; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 11, fig. 4.

87. **Sequoia langsdorfii** (Brongniart) Heer. Illustrated specimens.
88. Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1872 [1873], p. 410.

See Sequoia affinis.

4261. **Sequoia langsdorfii** (Brongniart) Heer. Illustrated specimen.
Fort Union and Miocene (Tert.). Southeast side of hill above Lost Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol Surv., 1899, p. 682, pl. 82, fig. 2.

5119. **Sequoia langsdorfii** (Brongniart) Heer.
Illustrated specimen.
Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 657, pl. 77, fig. 5.

7086. **Sequoia langsdorfii** (Brongniart) Heer.
Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 25.

See Taxodium distichum miocenicum.

61. **Sequoia longifolia** Lesquereux. Types.
73. Laramie? (Cret.). Greeley, Colorado.
74. Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 79, pl. 7, fig. 14; pl. 61, figs. 28, 29.

=Geinitzia longifolia.

30873. **Sequoia magnifica** Knowlton. Type.
Miocene (Tert.). Head of Crystal Creek and Cache Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 761, pls. 104, 105, 110, 117, figs. 1–5.

3751. **Sequoia pagiophylloides** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 276, pl. 42, figs. 1–3a.

65. **Sequoia reichenbachi** (Geinitz) Heer. Illustrated specimens.
68. Livingston (Cret.). Spring Canyon, near Fort Ellis, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 218.

See Abietites dubius.

591. **Sequoia reichenbachi** (Geinitz) Heer. Illustrated specimen.
Dakota (Cret.). Nine miles south of Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 51, pl. 1, figs. 10, 10b.

5929. **Sequoia reichenbachi** (Geinitz) Heer. Illustrated specimens.
7402. Lakota (Low. Cret.). Cliff on north side Pine Creek, near Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 674, pl. 165, figs. 1, 2; pl. 166, fig. 1.

3253. **Sequoia reichenbachi** (Geinitz) Heer. Illustrated specimens.
3857. Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal; banks of canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 243, 244, pl. 118, figs. 1, 4; pl. 119, figs. 1–5; pl. 120, figs. 7, 8; pl. 122, fig. 2; pl. 167, fig. 5.

3379. **Sequoia reichenbachi longifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 244, pl. 117, fig. 8.

3255. **Sequoia rigida** Heer. Illustrated specimens.
3855. Potomac (Low. Cret.). Near Telegraph Station; hillside
3856. near Potomac Run, Virginia.
3914. Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 246, pl. 118, fig. 3;
3949. pl. 121, fig. 2; pl. 126, fig. 2; pl. 130, fig. 3.

7119 **Sequoia spinosa** Newberry. Types.
to Eocene (Tert.). Cook Inlet, Alaska.
7121. Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 21, pl. 53, fig. 4.

3317. **Sequoia subulata** Heer. Illustrated specimens.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 245, pl. 117, fig. 7; pl. 118, figs. 5, 6.

30068. **Sequoia** sp.? Knowlton.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 154, pl. 22, fig. 1.

3353. **Sequoia** sp.? Fontaine.
3895. Potomac (Low. Cret.). 72d milepost, near Brooke; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 248, pl. 116, fig. 7; pl. 132, figs. 2, 5, 6, 10.

3925. **Sequoia** sp.? Fontaine.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 247, pl. 120, fig. 9.

7361. **Sequoia** sp. Fontaine.
Lakota (Low. Cret.) Cliff on north side of valley of South Fork of Hay Creek, two and one-half miles west of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 676, pl. 166, figs. 3, 4.

8510. **Sequoia** sp. Knowlton (cone).
Mascall beds, Miocene (Tert.). Van Horn's Ranch, John Day Valley, Grant County, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 26, pl. 1, fig. 2.

82. **Sequoia** sp. Lesquereux (cone).
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 79, pl. 61, fig. 30.

84. **Sequoia** sp. Lesquereux (cone).
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. Geol. Surv. Terr., VII, Pt. II, 1878, p. 76, pl. 65, fig. 5.

5078. 5097. 5172. **Sequoia** sp. Knowlton (cones).
Miocene (Tert.). Fossil Forest, Beds 5, 6, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 683, pl. 81, fig. 8; pl. 82, figs. 6, 7.

16604 to 16609. **Sigillaria brardii coriacea** David White. Types.
Le Roy (Penn.). Lawrence, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 105.

16631. **Sigillaria brochanti** Brongniart. Supplemental type.
Anthracite (Penn.). Butler mine, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 842.

6060. 6063. 6064. 6094. 6102. 6106. 6112. **Sigillaria (Asolanus) camptotænia** Wood.
Illustrated specimens.
Cherokee, Des Moines (Penn.). Near Gilkerson's Ford and Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 230, pl. 61, fig. 1 g; pl. 62, fig. i; pl. 64, fig. e; pl. 69; pl. 70, figs. 1, 3, 4.

16747. **Sigillaria cuspidata** Brongniart. Supplemental type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, pp. 486, 487.

16828. **Sigillaria elliptica** Brongniart. Supplemental type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, pp. 494, 495.

16399. 16400. **Sigillaria grand' euryi** Lesquereux. Types.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 795.

16806 to 16812. **Sigillaria lacoei** Lesquereux. Types.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 72, fig. 12; Text, II, 1880, p. 499.

16570. **Sigillaria laurenciana** (Lesquereux) David White. Types.
16571. Le Roy (Penn.). Lawrence, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 106.

16779 **Sigillaria leptoderma** Lesquereux. Types.
to Anthracite (Penn.). Plymouth, Pennsylvania.
16783.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 72, fig. 10; Text, II, 1880, p. 489.

16445. **Sigillaria leveretti** Lesquereux. Types.
16446. Cherokee? (Penn.). Spring Run, Augusta Township, Des Moines County, Iowa.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, pp. 800, 801, pl. 108, figs. 4, 5.

16517. **Sigillaria mamillaris** Brongniart. Illustrated specimens.
16518. Allegheny (Penn.). Olyphant, Pennsylvania.
16520.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 10, pl. 72, fig. 5; Text, II, 1880, p. 484; III, 1884, p. 799, pl. 108, fig. 6.

16798. **Sigillaria marginata** Lesquereux. Types.
16799. Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 71, fig. 5; Text, II, 1880, p. 498.

16415. **Sigillaria monostigma** Lesquereux. Types.
16416. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 73, figs. 3–5; Text, II, 1880, p. 468.

16486. **Sigillaria orbicularis** Brongniart. Supplemental type.
16487. Anthracite (Penn.). Maltby and Pittston, Pennsylvania.

Lesquereux, Coal Flora Second, Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, pp. 491, 492.

16553. **Sigillaria ovalis** Lesquereux. Type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 71, fig. 1; Text, II, 1880, p. 495.

16709 **Sigillaria pittstoniana** Lesquereux. Types.
to Anthracite (Penn.). Plymouth, Pennsylvania.
16714.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 71, fig. 4; Text, II, 1880, p. 493.

16576. **Sigillaria restricta** (Lesquereux) David White. Type.
16577. Thayer shales (Penn.). Thayer, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 106.

16457. **Sigillaria saulli** Brongniart. Supplemental type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 842.

16659. **Sigillaria** (**Asolanus**) **sigillarioides** (Lesquereux) David White. Reverse of type.
Cherokee, Des Moines, (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 239, pl. 70, fig. 2.

16754. **Sigillaria sillimanni** Brongniart. Supplemental type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, pp. 493, 494.

16650. **Sigillaria suspecta** David White. Type.
19732. Le Roy (Penn.). Lawrence, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 106.

16614. **Sigillaria venosa** Brongniart. Supplemental type.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 842.

16778. **Sigillaria voltzii** Brongniart. Illustrated specimen.
Anthracite (Penn.). Plymouth, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, pl. 72, fig. 11, 1879, Text, II, 1880, pp. 492, 493.

16745. **Sigillaria williamsi** Lesquereux. Types.
16746. Anthracite (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 448; III, 1884, p. 801, pl. 107, fig. 15.

2265. **Sigillaria** sp.? Lesquereux.
Carboniferous. Centerville, Tennessee.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 30.

16643. **Sigillariostrobus clavatus** (Lesquereux) David White. Type.
Monongahela (Penn.). Near Pittsburg, Pennsylvania.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 106.

See Trochophyllum clavatum.

16640. **Sigillariostrobus clavatus** (Lesquereux) David White.
16641. Supplemental types.
Le Roy (Penn.). Lawrence, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 106.

See Sigillariostrobus laurencianus.

16401. **Sigillariostrobus lacoei** Lesquereux. Types.
16401a. Anthracite (Penn.). Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, pp. 780, 792, 794, pl. 107, fig. 1 (as Lycopodites lacoei).

16640. **Sigillariostrobus laurencianus** Lesquereux. Types.
16641. Leroy (Penn.). Lawrence, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 794.

=Sigillariostrobus clavatus.

99. **Smilax grandifolia** (Unger) Heer. Illustrated specimen.
Laramie? (Cret.). Carbon, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 94, pl. 9, fig. 5.

50116. **Smilax grandifolia cretacea** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 40, pl. 46, fig. 3.

4436. **Smilax lamarensis** Knowlton. Types.
5134. Miocene (Tert.). East bank Lamar River, between Cache
5162. and Calfee creeks, and Fossil Forest Ridge, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 685, pl. 121, figs. 3, 4.

2733. **Smilax undulata** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 39, pl. 46, fig. 2.

2613. **Smilax wardii** Lesquereux. Type.
Miocene (Tert.). Van Horn's Ranch, John Day Valley, Oregon.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 19, pl. 13, fig. 1.

19612. **Sorocladus dispensus** Lesquereux. Type.
Dunkard (Perm.). Cassville, West Virginia.

Lesley, Dictionary Foss. Plants, Pa., Geol. Surv. Pa., P 4, III, 1890, p. 973.

14270. **Sorocladus ophioglossoides** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 48, fig. 11; Text, I, 1880, pp. 329, 330.

=Sphenopteris (Crossotheca) ophioglossoides.

14273. **Sorocladus sagittatus** Lesquereux. Types.
14274. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 760.

4224. **Sparganium stygium** Heer. Illustrated specimens.
4225. Fort Union (Tert.). Seven Mile Creek, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 18, pl. 3, figs. 6, 7.

7665. **Spathites** sp. Knowlton.
Montana (Cret.). Dunn's Ranch, west of Harper's Station, Albany County, Wyoming.

Knowlton, Bull. Geol. Soc. Amer., VIII, 1897, p. 140.

7703. **Spathyema? nevadensis** Knowlton. Types.
7704. Esmeralda (Neocene). 3.8 kilometers northeast of Emigrant Peak, Esmeralda County, Nevada.

Knowlton, Twenty-first Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 211, pl. 30, figs. 17, 18.

8246. **Sphenoglossum quadrifolium** Emmons. Type.
Traissic. Haywood, Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties, North Carolina, 1856, p. 335, pl. 1, fig. 1; Amer. Geology, 1857, VI, p. 134, pl. 5, fig. 2.

=Actinopteris quadrifolia.

3337. **Sphenolepidium dentifolium** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 258, pl. 127, figs. 3, 4; pl. 128, figs. 2–6; pl. 129, fig. 5; pl. 130, figs. 4–6, 10.

3184. **Sphenolepidium kurrianum** (Dunker) Heer.
3871 to 3873 Illustrated specimens.
Potomac (Low. Cret.). Dutch Gap Canal; entrance to Trent's Reach; hut above canal; Fredericksburg; 72d milepost; bank near Brooke; near telegraph station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 260, 261, pl. 126, figs. 1, 5, 6; pl. 128, figs. 1, 7; pl. 129, figs, 1, 4, 6, 8; pl. 130, fig. 11; pl. 131, fig. 4; pl. 167, fig. 2.

5941. **Sphenolepidium kurrianum** (Dunker) Heer.
7400. Illustrated specimens.
Lakota (Low. Cret.). Pine Creek, near Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 681, pl. 166, figs. 12, 13.

3266. **Sphenolepidium pachyphyllum** Fontaine. Type.
3875. Potomac (Low. Cret.). Near Telegraph Station (Fredericksburg Area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 259, pl. 131, figs. 6, 7.

3198. **Sphenolepidium parceramosum** Fontaine. Type.
3876. Potomac (Low. Cret.). Fredericksburg; 72d milepost,
3877. near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 257, 258, pl. 129, fig. 7; pl. 130, fig. 8; pl. 131, fig. 2.

5973b. **Sphenolepidium parceramosum** Fontaine.
5973c. Illustrated specimens.
Lakota (Low. Cret.). Cliff east bank Oak Creek, near Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 682, pl. 163, fig. 11b; pl. 168, fig. 3.

5928a. **Sphenolepidium parceramosum** Fontaine.
7395. Illustrated specimens.
Lakota (Low. Cret.). Cliff north side Pine Creek, two and one-half miles below Mrs. Dorsett's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 682, pl. 168, figs. 1, 2.

3373. **Sphenolepidium recurvifolium** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; hillside near Potomac Run; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 258, 259, pl. 127, fig. 2; pl. 130, figs. 2, 7.

3367. **Sphenolepidium sternbergianum** (Dunker) Heer.
3878. Illustrated specimens.
3917. Potomac (Low. Cret.). Hillside near Potomac Run; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 261, pl. 121, figs. 8, 10, 11; pl. 130, fig. 9.

5382. **Sphenolepidium sternbergianum** (Dunker) Heer.
Illustrated specimen.
Potomac (Low. Cret.). Near Mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 359, pl. 3, fig. 1.

3275. **Sphenolepidium sternbergianum densifolium** Fontaine.
3879. Illustrated specimens.
3928. Potomac (Low. Cret.). Near Telegraph Station; hillside near Potomac Run; 72d milepost; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 261, 262, pl. 118, fig. 7; pl. 121, figs. 5, 7, 9; pl. 125, fig. 2; pl. 129, fig. 3; pl. 130, fig. 1; pl. 131, figs. 1, 3; pl. 132, fig. 4.

3745. **Sphenolepidium sternbergianum densifolium** Fontaine.
Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 268, pl. 36, fig. 10.

3338. **Sphenolepidium virginicum** Fontaine. Type.
3874. Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 259, 260, pl. 125, fig. 4; pl. 166, fig. 6.

18710. **Sphenophyllum angustifolium** Germar. Illustrated specimen.
Monongahela (Penn.). Hocking Valley, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 726, pl. 93, fig. 8.

18629. **Sphenophyllum bifurcatum** Lesquereux. Type.
Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Rept. Geol. Surv. Ark., II, 1862, p. 309, pl. 1, fig. 2; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 1, pl. 2, figs. 10, 10a; Text, I, 1880, p. 55.

6086. **Sphenophyllum emarginatum** Brongniart.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 177, pl. 59, fig. 1d.

18509. **Sphenophyllum emarginatum minor** David White. Type.
Cherokee (Penn.). Lansing, Kansas.

White, Bull. No. 211, U. S. Geol. Surv., 1903, p. 103.

18291. **Sphenophyllum (Asterophyllites?) fasciculatum** (Lesque-
18292. reux) David White. See Asterophyllites fasciculatus.
18297.

5637. **Sphenophyllum (Asterophyllites?) fasciculatum** (Lesque-
5639. reux) David White. Illustrated specimens.
18295. Cherokee, Des Moines (Penn.). Owen's Coal Mine and
18296. Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 183, pl. 50, figs. 1–4.

12386. **Sphenophyllum lescurianum** David White. Types.
18711b. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 182, pl. 50, fig. 6b; pl. 51, fig. b; pl. 24, fig. 3c.

18468. **Sphenophyllum longifolium** Germar. Supplemental type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 53.

5679. **Sphenophyllum majus** Bronn. Illustrated specimens.
5680. Cherokee, Des Moines (Penn.). Owen's Coal Mine, and
18711. near Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 180, pl. 50, figs. 5, 6a; pl. 51, fig. a; pl. 73, fig. 3.

6431. **Sphenophyllum suspectum** David White. Types.
6747. McAlester (Penn.). One-half mile west of McAlester, Indian Territory.

White, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 522, pl. 68, figs. 11, 12.

18461 **Sphenophyllum tenerrimum** Ettingshausen.
to Illustrated specimens.
18464. Pottsville (Penn.). Rushville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 728, pl. 92, figs. 9–10a.

14953. **Sphenopteris brittsii** Lesquereux. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 277, pl. 55, fig. 2.

14954. **Sphenopteris brittsii** Lesquereux. Illustrated specimens.
14955. Allegheny? (Penn.). Nelsonville, Ohio.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 764, pl. 102, figs. 3, 4.

5626. **Sphenopteris brittsii** Lesquereux. Illustrated specimens.
5668. Cherokee, Des Moines (Penn.). Pitcher's and Owen's
5669. coal mines and Deepwater, Henry County, Missouri.
5703. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 53, pl. 15, fig. 1;
5705. pl. 16; pl. 17; pl. 18, figs. 1, 2; pl. 19, fig. 3.
5706.

5619. **Sphenopteris (Hymenotheca) broadheadi** David White.
5620. Type.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 41, pl. 13, figs. 1, 2.

14672. **Sphenopteris canneltonensis** David White. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 56.

See Sphenopteris hymenophylloides.

5569. **Sphenopteris canneltonensis** David White.
Illustrated specimen.
Cherokee, Des Moines (Penn.). Hobb's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 55, pl. 15, fig. 2.

5662. **Sphenopteris capitata** David White. Type.
Cherokee, Des Moines (Penn.). Near Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 57, pl. 15, fig. 3.

14612. **Sphenopteris chærophylloides** (Brongniart) Presl.
14613. Supplemental types.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 270.

14340. **Sphenopteris communis** Lesquereux. Type.
Coal-bearing shale (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 762, pl. 104, fig. 1.

14122a. **Sphenopteris coralloides** (Gutbier) Bailey.
Illustrated specimen.
Dunkard (Perm.). Cassville, West Virginia.

Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, III, 1890, p. 983.

14644. **Sphenopteris cristata** (Brongniart) Presl.
14645. Illustrated specimens.
Pennsylvanian. Rhode Island.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 761, pl. 102, figs. 1, 1a.

14137. **Sphenopteris dissecta** Brongniart. Supplemental type.
Pottsville (Penn.). Carbon Hill Tunnel, Old Forge, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 836.

8203. **Sphenopteris egyptiaca** Emmons. Type.
Triassic. Egypt, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, pp. 36, 37, figs. 8, 9.—Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 280, pl. 38, fig. 1.

=Acrostichites egyptiacus.

30849. **Sphenopteris fremonti** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 174.

14397. **Sphenopteris gravenhorstii** var. B Brongniart.
14398. Illustrated specimen.
Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 763, pl. 101, figs. 1, 1a, 1b.

5380. **Sphenopteris grevillioides** Heer. Illustrated specimen.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 359, pl. 2, fig. 5.

1613. **Sphenopteris guyottii** Lesquereux. Types.
1614. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 137, pl. 21, figs. 6, 7.

14386. **Sphenopteris harveyi** Lesquereux. Types.
14387. Coal-bearing shale (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 766, pl. 103, fig. 7.

14672. **Sphenopteris hymenophylloides** Brongniart.
Illustrated specimen.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 764, pl. 102, fig. 2.

=Sphenopteris canneltonensis.

5661. **Sphenopteris illinoisensis** David White. Types.
5697. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine (?), Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 58, pl. 19, fig. 4; pl. 44, fig. 1.

14221. **Sphenopteris inequilateralis** Lesquereux. Type.
Coal-bearing shale (Penn.). Lemon's coal bank, near Fayetteville, Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 765, pl. 103, fig. 4.

5802. **Sphenopteris lacoei** David White. Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 38, pl. 12, fig. 3.

15. **Sphenopteris lakesii** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. 1878, p. 49, pl. 2, fig. 1.
=Dryopteris arguta.

3311. **Sphenopteris latiloba** Fontaine. Types.
3819 to 3821. Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal; Fredericksburg; Deep Bottom; near Telegraph Station (Fredericksburg area), Virginia.
Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 90, pl. 35, figs. 3–5; pl. 36, figs. 4–9; pl. 37, fig. 1.

1360. **Sphenopteris lobifolia** Morris. Illustrated specimen.
Upper Coal Measures (Penn.). Newcastle, New South Wales, Australia.
Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 715, Atlas, p. 5, pl. 12, fig. 12.

11. **Sphenopteris membranacea** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 50, pl. 2, fig. 2.
=Dryopteris arguta.

5663. **Sphenopteris missouriensis** David White. Type.
5664. Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.
White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 43, pl. 14, figs. 1, 2.

14885. **Sphenopteris mixta** Schimper. Illustrated specimens.
14886. Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 54, fig. 1; Text, I, 1880, p. 276.

5687. **Sphenopteris mixta** Schimper. Illustrated specimens.
5692. 5712. Cherokee, Des Moines (Penn.). Owen's and Hobb's coal mines, and Deepwater, Henry County, Missouri.
5713. 5714. White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 35, pl. 11, fig. 3; pl. 12, figs. 1, 2; pl. 13, figs. 4, 5.

13. **Sphenopteris nigricans** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.
Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 51, pl. 2, figs. 4, 5.

14390. **Sphenopteris obovata** Lindley and Hutton. Illustrated specimen.
Coal-bearing shale (Penn.). Washington County, Arkansas.
Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P Text, III, 1884, p. 769, pl. 103, fig. 6.

14270. **Sphenopteris (Crossotheca) ophioglossoides** (Lesquereux) David White. Type.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.
White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 62.
See Sorocladus ophioglossoides.

5698. **Sphenopteris (Crossotheca) ophioglossoides** (Lesquereux) David White. Illustrated specimen.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 60, pl. 20, figs. 3, 4.

3381. **Sphenopteris pachyphylla** Fontaine. Type.
Potomac (Low. Cret.). Entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 93, pl. 50, fig. 5.

30850. **Sphenopteris? paucifolia** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 304.

14726. 14728. **Sphenopteris (Hymenophyllum) pendula** Lesquereux. Types.
Pottsville (Penn.). Cordova, Alabama.

Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, III, 1890, p. 988.

5803. 5807. **Sphenopteris pinnatifida** (Lesquereux) David White. Illustrated specimens.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 45, pl. 18, figs. 3, 4.

14304. **Sphenopteris pinnatifida** (Lesquereux) David White. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 45, pl. 19, fig. 1

See Sphenopteris (Hymenophyllites) tridactylites.

14663. 14664. **Sphenopteris plicata** Lesquereux. Illustrated specimens.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 763, pl. 111, fig. 28.

7349. **Sphenopteris plurinervia** Heer? Illustrated specimen.
Lakota (Low. Cret.). South Fork of Hay Creek near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 657, pl. 160, figs. 19, 20,

19851 to 19854. **Sphenopteris royi** Lesquereux. Types.
Walden (Penn.). Rockwood, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 768, pl. 104, figs. 7–10.

14213. 14214. **Sphenopteris solida** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 769, pl. 101, fig. 3.

=Eremopteris solida.

5649. **Sphenopteris suspecta** David White. Types.
5650. Cherokee, Des Moines (Penn.). Pitcher's and Owen's coal
5652. mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 51, pl. 35, figs. 1–3.

6429. **Sphenopteris taffii** David White. Types.
6430. McAlester (Penn.). One-half mile west of McAlester,
6742. Indian Territory.

White, David, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, p. 485, pl. 67, figs, 7, 7a; pl. 68, fig. 19.

14321. **Sphenopteris tenella** Brongniart. Supplemental type.
Pennsylvanian. Thayer, Neosho County, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 836.

3394. **Sphenopteris thyrsopteroides** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, and at fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 89, pl. 25, fig. 3; pl. 58, fig. 5.

14132. **Sphenopteris tracyana** Lesquereux. Type.
Pottsville (Penn.). Tracy City, Tennessee.

Lesquereux, Coal Flora, Second Geol Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 767, pl. 101, fig. 2.

14304. **Sphenopteris (Hymenophyllites) tridactylites** Brongniart. Illustrated specimen.
Cherokee, Des Moines (Penn.). Clinton, Henry County, Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 10, pl. 55, figs. 9, 9a, 9b; Text, I, 1880, p. 284.

=Sphenopteris pinnatifida.

2651. **Sphenopteris trifoliata** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 305, pl. 2, figs. 2, 2d.

=Thyrsopteris trifoliata.

2653. **Sphenopteris triloba** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 304; pl. 1, fig. 8.

=Thyrsopteris triloba.

3735. **Sphenopteris valdensis** Heer? Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 263, pl. 36, fig. 2.

5616. **Sphenopteris van ingeni** David White. Type.
Cherokee, Des Moines (Penn.). Pitcher's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 47, pl. 13, fig. 3.

5615. **Sphenopteris wardiana** David White. Types.
5617. Cherokee, Des Moines (Penn.). Pitcher's and Owen's coal mines, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 39, pl. 11, figs. 1, 2.

5654. **Sphenopteris** sp. David White.
Cherokee, Des Moines (Penn.). Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 66, pl. 35, fig. 6.

3490. **Sphenozamites rogersianus** Fontaine. Types.
30922. Triassic. Clover Hill, Richmond Coal Field, Virginia.
30923.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 80.

3. **Spheria lapidea** Lesquereux. Type.
Laramie (Cret.). Raton Mountains, New Mexico.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 373; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 34, pl. 1, fig. 3.

=Rosellinites lapideus.

19626 **Spirangium intermedium** Lesquereux. Type.
to Pennsylvanian. Campbells Ledge, Pittston, Pennsylvania.
19630.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, II, 1880, p. 521.

19649. **Spirangium johnstoni** Kidston. Plastotype.
Coal Measures. Coseley, near Dudley, England.

Kidston, Proc. Roy. Phys. Soc. Edinb., IX, p. 11, pl. 1, fig. 6.

19675. **Spirangium multiplicatum** Lesquereux. Type.
Allegheny (Penn.). Mazon Creek, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 75, fig. 11; Text, II, 1880, p. 520.

19651. **Spirangium prendeli** Lesquereux. Types.
19652. Allegheny (Penn.). Mazon Creek, Grundy County, Illinois.

Lesquereux, Rept. Geol. Surv. Ill., IV, 1870, p. 466, pl. 27, figs. 10, 12; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 16, pl. 75, figs. 13, 14; Text, II, 1880, p. 519.

4178. **Spiraxis bivalvis** Ward. Type.
Fort Union (Tert.). Head of Clear Creek, twenty-four miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 14, pl. 1, fig. 3.

25196 **Sporocystis planus** Lesquereux. Types.
to Pottsville (Penn.). Campbells Ledge, Pittston, Pennsylvania.
25199.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 69, fig. 15; Text, II, 1880, p. 458.

387. **Staphylea acuminata** Lesquereux. Types.
388. Green River (Tert.). Middle Park?, Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 415; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, p. 267, pl. 48, figs. 4, 5.

17139. **Stemmatopteris anceps** Lesquereux. Types.
17140. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 838.

17078. **Stemmatopteris angustata** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 59, fig. 5; Text, I, 1880, p. 339.

11050. **Stemmatopteris cyclostigma** Lesquereux. Types.
17088. Anthracite (Penn.). Olyphant, Pennsylvania.
17089.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 341.

17142. **Stemmatopteris emarginata** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 337.

17070. **Stemmatopteris hirsuta** Lesquereux. Type.
Pennsylvanian. Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, I, 1880, p. 337.

17134 **Stemmatopteris microstigma** Lesquereux. Types.
to Allegheny (Penn.). Cannelton, Pennsylvania.
17137.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 838.

17141. **Stemmatopteris mimica** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 59, fig. 4; Text, I, 1880, p. 341.

17096. **Stemmatopteris polita** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 59, fig. 6; Text, I, 1880, p. 342.

17073. **Stemmatopteris squamosa** Lesquereux. Type.
Pennsylvanian. Olyphant, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 59, fig. 2; Text, I, 1880, p. 339.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 112–113, pl. 21, fig. 8.

3428. **Sterculia elegans** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 314, pl. 157, fig. 2; pl. 158, figs. 2, 3.

678 **Sterculia lugubris** Lesquereux. Types.
to Dakota (Cret.). Near Golden, Colorado.
680.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 81, pl. 6, figs. 1–3.

670. **Sterculia obtusiloba** Lesquereux. Type.
Dakota (Cret.). Clay County, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 82, pl. 8, fig. 3.

=Sterculia tripartita.
See Aralia tripartita.

50117. **Sterculia reticulata** Lesquereux. Type.
Dakota (Cret.). Ten miles northeast of Delphos, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 185, pl. 34, fig. 10.

2698. **Sterculia snowii** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 183, pl. 30, fig. 5; pl. 31, figs. 2, 3; pl. 32; pl. 33, figs. 1–4.

2745. **Sterculia snowii disjuncta** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 184, pl. 58, fig. 6.

670. **Sterculia tripartita** (Lesquereux) Knowlton. Type.
Dakota (Cret.). Clay County, Kansas.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 224.

See Sterculia obtusiloba and Aralia tripartita.

8208. **Strangerites planus** Edmonds. Type.
Triassic. Ellingtons, four miles from Lockville, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 122, fig. 90.

=Pseudodanæopsis plana.
See Pseudodanæopsis reticulata.

5405. **Tæniocrada chondriformis** (Penhallow) David White. Type.
Upper Chemung (Dev.). Lanesboro, Susquehanna County, Pennsylvania.

White, N. Y. State Mus., Bull. No. 52, Pal. VI, 1902, p. 604.

See Haliserites chondriformis.

25164. **Tæniocrada lesquereuxi** David White. Type.
Erian (Dev.). Factoryville, Wyoming County, Pennsylvania.

White, N. Y. State Mus., Bull. No. 52, Pal. VI, 1902, p. 603.

See Haliserites dechenianus.

5409. **Tæniocrada lesquereuxi** David White. Illustrated specimen.
Upper Chemung (Dev.). Lanesboro, Susquehanna County, Pennsylvania.

White, N. Y. State Mus., Bull. No. 52, Pal. VI, 1902, p. 604.

See Haliserites dechenianus lineatus.

19276. **Tæniophyllum brevifolium** Lesquereux. Type.
19277. Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 788, pl. 108, figs. 3, 3a.

19270. **Tæniophyllum contexum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 82, fig. 2; Text, II, 1880, p. 465.

19256. **Tæniophyllum decurrens** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 81, fig. 1; Text, II, 1880, p. 464.

19252. **Tæniophyllum deflexum** Lesquereux. Type.
Allegheny (Penn.). Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, pl. 83, fig. 4; Text, II, 1880, p. 465.

6068. **Tæniophyllum latifolium** David White. Types.
6070. Cherokee, Des Moines (Penn.). Deepwater and Owen's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 247, pl. 63, fig. 4; pl. 71.

2205. **Tæniophyllum?** sp. Lesquereux.
Pennsylvanian. Warrior Creek, Jefferson County, Alabama.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 29.

6940. **Tæniopteris gibbsii** Newberry. Type.
Puget Sound (Cret.). Point Doughty, Orcas Island, Washington.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 512.

=Nillsonia gibbsii.

5556. **Tæniopteris missouriensis** David White. Type.
to Cherokee, Des Moines (Penn.). Hobb's Coal Mine, and
5560. Deepwater, Henry County, Missouri.

White, Bull. Geol. Soc. Amer., IV, 1893, p. 119, pl. 1, figs. 1–7; Mon. XXXVII, U. S. Geol. Surv., 1899, p. 140, pl. 40, figs. 1–7.

11699. **Tæniopteris truncata** Lesquereux. Type.
Pottsville (Penn.). Campbell's Ledge, Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 743, pl. 94, fig. 8.

25056. **Taonurus colletti** Lesquereux. Type.
Des Moines? (Penn.). Missouri.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 1, pl. 4, fig. 7; Text, I, 1880, p. 7.

4289. **Taxites olriki** Heer. Illustrated specimens.
5095. Fort Union (Tert.). Walls of Yellowstone Canyon, above
5158. mouth of Hellroaring Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 680, pl. 82, figs. 1, 4, 5.

3250. **Taxodium (Glyptostrobus) brookense** Fontaine. Type.
3866. Potomac (Low. Cret.). 72d milepost, near Brooke, Vir-
3965. ginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 254–256, pl. 122, fig. 1; pl. 124, figs. 3–9; pl. 131, fig. 5; pl. 165, figs. 1–3; pl. 166, figs. 4, 7; pl. 167, fig. 3.

=Glyptostrobus brookense.

3575. **Taxodium (Glyptostrobus) brookense angustifolium** Fontaine. Type.
Potomac (Low. Cret.). White House Bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 256, 257, pl. 167, fig. 1.

=Glyptostrobus brookense angustifolium.

6935. **Taxodium cuneatum** Newberry. Types.
6936. Puget Sound (Cret.). Nanaimo, Vancouver Island, British Columbia.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 517.

=Sequoia cuneata.

3964. **Taxodium (Glyptostrobus) denticulatum** Fontaine. Type.
Potomac (Low. Cret.). Kankeys, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 253, pl, 124, fig. 1.

57. **Taxodium distichum miocenum** Heer. Illustrated specimen.
Green River (Tert.). Elko Station, Nevada.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 73, pl. 6, fig. 14.

7086. **Taxodium distichum miocenum** Heer. Illustrated specimen.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 22, pl. 47, fig. 6.

=Sequoia langsdorfii.

7118. **Taxodium distichum miocenum** Heer. Illustrated specimen.
Eocene (Tert.) Cook Inlet, Alaska.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 22, pl. 52, fig. 2.

3270. **Taxodium (Glyptostrobus) fastigiatum** Fontaine. Types.
3867. Potomac (Low. Cret.). 72d milepost, near Brooke; hill-
3868. side near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 253, pl. 135, figs. 1, 3.

=Glyptostrobus fastigiatus.

50. **Taxodium occidentale** Newberry. Types.
51. Fort Union (Tert.). Yellowstone River (Dawson County?),
6987. Montana.

Newberry, Boston Journ. Nat. Hist., VII, 1863, p. 576; Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 45; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 11, figs. 1–3; Mon. XXXV, U. S. Geol. Surv., 1898, p. 23, pl. 26, figs. 1–3.

3396. **Taxodium (Glyptostrobus) ramosum** Fontaine. Types.
3864. Potomac (Low. Cret.). 72d milepost, near Brooke, Vir-
3865. ginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 251, pl. 123, figs. 2, 3; pl. 124, fig. 2; pl. 127, fig. 1; pl. 132, fig. 1; pl. 146, fig. 1.

3461. **Taxodium (Glyptostrobus) virginicum** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 252, pl. 121, fig. 6.

8552. **Taxodium** sp. Knowlton (aments).
Mascall beds, Miocene (Tert.). South Fork John Day River, Van Horn's Ranch, Oregon.

Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 27, pl. 1, fig. 6.

304. **Tetranthera sessiliflora** Lesquereux. Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 217, pl. 35, fig. 8.

=Malpoenna sessiliflora.
See Laurus sessiliflora.

305. **Tetranthera sessiliflora** Lesquereux. Illustrated specimen.
Livingston (Cret.). Bozeman Coal Field, Montana.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 217, pl. 35, fig. 9.

=Malpoenna weediana.

3278. **Thinnfeldia fontainei** Berry. Types.
3849. Potomac (Low. Cret.). 72d milepost, near Brooke; roadside near Potomac Run, Virginia.

Berry, Bull. Torrey Bot. Club, XXX, 1903, p. 443.

See Thinnfeldia variabilis.

3313. **Thinnfeldia granulata** Fontaine. Type.
3784. Fishing hut above Dutch Gap Canal; roadside near Potomac
3848. Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 111, pl. 26, figs. 10–12; pl. 27, figs. 1–5, 8; pl. 169, fig. 1.

5255. **Thinnfeldia lanceolata** Knowlton. Type.
Laramie (Cret.). Head of Fir Canyon, eight miles east of Bozeman, Montana.

Knowlton, Bull. No. 105, U. S. Geol. Surv., 1894, p. 49, pl. 5, fig. 5.

=Protophyllocladus lanceolatus.

838. **Thinnfeldia montana** Knowlton.
5256 Types and illustrated specimens.
to Laramie and Livingston (Cret.). Spring Canyon, near
5259. Fort Ellis and Bozeman Coal Field, Montana.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 227.

=Protophyllocladus polymorphus.
See Thinnfeldia polymorpha and Salisburia polymorpha.

590. **Thinnfeldia subintegrifolia** (Lesquereux) Knowlton. Type.
Dakota (Cret.). Decatur, Nebraska.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 228.

=Protophyllocladus subintegrifolius.
See Phyllocladus subintegrifolius.

50108 to 50110. **Thinnfeldia subintegrifolia** (Lesquereux) Knowlton. Illustrated specimens.
Dakota (Cret.). Cloud County, Kansas.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 228.

=Protophyllocladus subintegrifolius.
See Phyllocladus subintegrifolius.

3278. 3849. **Thinnfeldia variabilis** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke; roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 110–111, pl. 17, figs. 3–7; pl. 18, figs. 1–6.

=Thinnfeldia fontainei.

4006. **Thinnfeldia variabilis?** Fontaine. Supplemental type.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Diller and Stanton, Bull. Geol. Soc. Amer., V, 1894, p. 450; in Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 15.

=Cladophlebis falcata.

6972. 6978. **Thuja interrupta** Newberry. Types.
Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 42; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, pl. 11, figs. 5, 5a; Mon. XXXV, U. S. Geol. Surv., 1898, p. 25, pl. 26, fig. 5; pl. 27, figs. 5–5d.

3837. 3389. 3938. **Thyrsopteris angustifolia** Fontaine. Types.
Potomac (Low. Cret.). Entrance to Trent's Reach; fishing hut above Dutch Gap Canal; 72d milepost, near Brooke; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 131, pl. 44, fig. 4; pl. 45, fig. 3; pl. 48, fig. 2; pl. 49, figs. 3, 4; pl. 50, fig. 2; pl. 58, fig. 8.

3218. **Thyrsopteris angustiloba** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal; entrance to Trent's Reach; White House Bluff, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 134, 135, pl. 48, figs. 3–5; pl. 55, fig. 3.

3193. 3788. 3789. **Thyrsopteris bella** Fontaine. Types.
Potomac (Low. Cret.). Fredericksburg; entrance to Trent's Reach; White House Bluff; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 139, 140, pl. 53, fig. 5; pl. 55, figs. 6, 7; pl. 56, figs. 2, 5; pl. 57, figs. 1, 5; pl. 58, fig. 4.

3412. **Thyrsopteris brevifolia** Fontaine. Type.
Potomac (Low. Cret.). Banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 121, pl. 24, figs. 5, 10.

7335. **Thyrsopteris brevifolia** Fontaine. Illustrated specimens.
7336. Lakota (Low. Cret.). Two miles southeast of Barrett,
7347. Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 660, pl. 161, figs. 10–15.

3413. **Thyrsopteris brevipennis** Fontaine. Types.
3933. Potomac (Low. Cret.). Banks of Dutch Gap Canal; fish-
3936. ing hut above Dutch Gap Canal, Virginia; Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 124, pl. 34, fig. 3; pl. 36, fig. 2; pl. 37, figs. 3, 9; pl. 38, fig. 1; pl. 41, fig. 4.

5963. **Thyrsopteris brevipennis** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). South Fork Hay Creek near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 662, pl. 162, fig. 1a.

3224. **Thyrsopteris crassinervis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 130, pl. 41, figs. 1–3.

7352. **Thyrsopteris crassinervis** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). South Fork of Hay Creek near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 659, pl. 161, figs. 3, 4.

3385. **Thyrsopteris crenata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 127, pl. 39, figs. 1, 2.

2342. **Thyrsopteris decurrens** Fontaine. Types.
3774 Potomac (Low. Cret.). Banks of Dutch Gap Canal; Fred-
to ericksburg; 72d mile post near Brooke; hillside near
3776. Potomac Run; fishing hut above Dutch Gap Canal,
3778. Virginia.
3786.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 130, pl. 43, fig. 7; pl. 46, figs. 2, 4; pl. 49; figs. 5–7.

3183. **Thyrsopteris densifolia** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 129, pl. 39, fig. 3; pl. 40, figs. 2–5; pl. 41, fig. 5.

3833. **Thyrsopteris dentata** Fontaine. Types.
3190. Potomac (Low. Cret.). Fredericksburg; hillside near Potomac Run; banks of Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 121–122, pl. 24, figs. 4, 6, 7, 9; pl. 25, figs. 1, 2.

7346. **Thyrsopteris dentifolia** Fontaine. Type.
Lakota (Low. Cret.). Two miles southeast of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 660, pl. 161, figs. 6–9.

3222. **Thyrsopteris distans** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 134, pl. 47, fig. 3; pl. 54, fig. 8.

3191. **Thyrsopteris divaricata** Fontaine. Types.
3770. Potomac (Low. Cret.). Fishing hut above Dutch Gap
3776. Canal; banks of same canal; Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 125, pl. 37, figs. 5–8; pl. 170, fig. 1.

3835. **Thyrsopteris elliptica** Fontaine. Types.
3220. Potomac (Low. Cret.). Fredericksburg; banks of Dutch
3977. Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 133, pl. 24, fig. 3; pl. 46, fig. 1; pl. 50, figs. 6, 7; pl. 51, figs. 4, 6, 7; pl. 54, fig. 6; pl. 55, fig. 4; pl. 56, figs. 6, 7; pl. 57, fig. 6; pl. 58, fig. 2.

5959. **Thyrsopteris elliptica** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). South Fork Hay Creek near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 659, pl. 161, fig. 5.

3221. **Thyrsopteris heteroloba** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 139, pl. 53, fig. 4.

3934. **Thyrsopteris heteromorpha** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 136, 137, pl. 52, fig. 1.

3307. **Thyrsopteris insignis** Fontaine. Types.
3770. Potomac (Low. Cret.). Fredericksburg; roadside near
3834. Potomac Run, Virginia.
3836.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 127, 128, pl. 39, fig. 4; pl. 40, fig. 1; pl. 41, fig. 6; pl. 42, figs. 1, 2, 3; pl. 43, figs. 1, 3.

3446. **Thyrsopteris insignis angustipennis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 129, pl. 42, fig. 3; pl. 43, fig. 2.

3352. **Thyrsopteris meekiana** Fontaine. Types.
3930. Potomac (Low. Cret.). Fredericksburg, and fishing hut
3932. above Dutch Gap Canal, Virginia; Covington street, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 125–126, pl. 38, figs. 2–4, 8; pl. 50, figs. 7, 8; pl. 51, fig. 3.

3310. **Thyrsopteris meekiana angustiloba** Fontaine. Types.
3941. Potomac (Low. Cret.). Baltimore, Maryland; fishing hut above Dutch Gap Canal; Fredericksburg; 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 126, pl. 38, figs. 5–7, 9; pl. 43, fig. 8; pl. 44, fig. 3; pl. 47, fig. 4; pl. 48, fig. 1; pl. 54, figs. 2, 11; pl. 55, fig. 1; pl. 56, figs. 1, 3.

3241. **Thyrsopteris microloba** Fontaine. Type.
Potomac (Low. Cret.). Fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 140, pl. 57, fig. 4.

3376. **Thyrsopteris microloba alata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; above Dutch Gap Canal; near fishing hut, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 140, 141, pl. 55, fig. 5; pl. 58, fig. 1.

3940. **Thyrsopteris microphylla** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 131, 132; pl. 45, figs. 1, 2, 4, 5.

3192. **Thyrsopteris nervosa** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; hillside near Potomac Run, Virginia.

Fontaine, Mon, XV, U. S. Geol. Surv., 1889, p. 122, pl. 25, figs. 4, 5, 16; pl; 37, figs. 2, 4; pl. 39, fig. 5; pl. 40, fig. 6.

3345. **Thyrsopteris obtusiloba** Fontaine. Types.
3790. Potomac (Low. Cret.). Red clay ball, banks of Dutch Gap Canal; hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 143, pl. 58, figs. 7, 10.

3976. **Thyrsopteris pachyphylla** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 135, pl. 50, fig. 3.

3217. **Thyrsopteris pachyrachis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg; roadside near Potomac Run; near Telegraph Station; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 132, 133, pl. 46, figs. 3, 5; pl. 47, figs. 1, 2; pl. 49, fig. 1.

7348. **Thyrsopteris pecopteroides** Fontaine. Illustrated specimens.
Lakota (Low. Cret.). Two miles southeast of Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 661, pl. 162, figs. 16–19.

3204. **Thyrsopteris pinnatifida** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 136, pl. 51, fig. 2; pl. 54, figs. 4, 5, 7; pl. 57, fig. 7.

7350. **Thyrsopteris pinnatifida?** Fontaine. Illustrated specimen.
Lakota (Low. Cret.). South Fork of Hay Creek near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 658, pl. 161, figs. 1, 2.

3186. **Thyrsopteris rarinervis** Fontaine. Types.
3830 to 3832.
Potomac (Low. Cret.). Fredericksburg; 72d milepost, near Brooke; White House Bluff; entrance to Trent's Reach, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 123–124, pl. 26, figs. 6, 7; pl. 43, figs. 4–6; pl. 44, figs. 1, 2, 5; pl. 49, fig. 2; pl. 169, figs. 6, 7.

4003. **Thyrsopteris rarinervis** Fontaine. Illustrated specimen.
Shasta (Low. Cret.). Near Lowrey, Tehama County, California.

Fontaine in Ward, Mon. XLVIII, U. S. Geol. Surv., 1895, p. 225, pl. 65, figs. 3, 4.

3219. **Thyrsopteris retusa** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 144, pl. 59, fig. 10.

3401. **Thyrsopteris rhombifolia** Fontaine. Types.
3785. 3787. 3939.
Potomac (Low. Cret.). Fredericksburg; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 138, pl. 52, fig. 5; pl. 54, fig. 1.

3445. **Thyrsopteris rhombiloba** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 144, pl. 59, figs. 6, 7; pl. 60, fig. 8.

3223. **Thyrsopteris sphenopteroides** Fontaine. Types.
3934. 3937.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 143, pl. 58, fig. 6.

3443. **Thyrsopteris squarrosa** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run; near Telegraph Station (Fredericksburg area), Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 143, pl. 59, fig. 3.

2651. **Thyrsopteris trifoliata** (Hall) Lesquereux. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 38.

See Sphenopteris trifoliata.

2653. **Thyrsopteris triloba** (Hall) Lesquereux. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 38.

See Sphenopteris triloba.

3451. **Thyrsopteris varians** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 137, pl. 52, figs. 2–4; pl. 53, figs. 1–3; pl. 54, fig. 10; pl. 57, fig. 2.

559. **Tilia antiqua** Newberry. Types.
6965. Fort Union (Tert.). Near Fort Clarke, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 52; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, figs. 1, 2.

=Viburnum antiquum.

6168. **Titanophyllum brittsii** David White. Type.
Cherokee, Des Moines (Penn.). Near Jordan's Coal Mine, Henry County, Missouri.

White, Mon. XXXVII, U. S. Geol. Surv., 1899, p. 271.

1617. **Tmesipteris alleni** (Lesquereux) Hollick. Type.
Green River (Tert.). Florissant (South Park), Colorado.

Hollick, Bull. Torr. Bot. Club, XXI, p. 256, 1894, pl. 205, fig. 12.

See Salvinia alleni and Ophioglossum alleni.

662 to 664. **Todia saportanea** Lesquereux. Types.
Dakota (Cret.). Southern Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 48, pl. 29, figs. 1, 3, 4.

=Lomatia? saportanea.

3435. **Torreya falcata** Fontaine. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 235, pl. 113, fig. 4.

=Tumion falcatum.

681. **Torreya oblanceolata** Lesquereux. Type.
Dakota? (Cret.). Near Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 30, pl. 1, fig. 2.

=Tumion oblanceolatum.

3455. **Torreya virginica** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 234, 235, pl. 109, fig. 8.

=Tumion virginicum.

7629a. **Trapa americana** Knowlton. Type.
Payette (Miocene). Idaho City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 733, pl. 102, fig. 7a.

7655. **Trapa cuneata** Knowlton. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 64, pl. 5, fig. 6.

547a. **Trapa? microphylla** Lesquereux. Types.
867. Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 295, pl. 61, figs. 17, 18.

5120. **Trapa? microphylla** Lesquereux. Illustrated specimens.
5121. Laramie (Cret.). North of Pinyon Peak, on Wolverine Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 661, pl. 77, figs. 3, 4.

5317 to 5319. **Trapa? microphylla** Lesquereux. Illustrated specimens.
Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 64, pl. 28, figs. 3–5.

7629b. **Trapa? occidentalis** Knowlton. Type.
Payette, Miocene (Tert.). Idaho City, Idaho.

Knowlton, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, p. 734, pl. 102, fig. 7b.

2652. **Trichopteris gracilis** Hall. Type.
Jurassic? or Lower Cretaceous. Uinta County, Wyoming.

Hall in Fremont, Expl. Exped. to the Rocky Mts. (Doc. 166), 1845, p. 307, pl. 1, fig. 5.

16727 to 16733. **Trigonocarpum adamsii** Lesquereux. Types.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 820, pl. 110, figs. 51–57.

26536 to 26538. **Trigonocarpum ampullæformis** Lesquereux. Types.
Pottsville (Penn.). Washington County, Arkansas, and Tracy City, Tennessee.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 823, pl. 109, figs. 18, 19, 21.

26137. **Trigonocarpum dawesii** Lindley and Hutton. Illustrated specimens.
Pennsylvanian. Cannelton, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 18, pl. 85, fig. 25; Text, II, 1880, p. 586.

26138 to 26140. **Trigonocarpum dawesii** Lindley and Hutton. Illustrated specimens.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 821, pl. 111, figs. 4–6.

26755. **Trigonocarpum giffordi** Lesquereux. Type.
Pennsylvanian. Near Alta, Peoria County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas 1879, p. 17, pl. 85, figs. 5, 6; Text, II, 1880, p. 592.

26018 to 26020. **Trigonocarpum grandis** Lesquereux. Types.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv., Pa., Rept. Prog. P, Text, III, 1884, p. 821, pl. 111, figs. 1, 2, 3.

26268. **Trigonocarpum helenæ** David White. Type.
Pottsville (Penn.). Helena, Alabama.

White, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 909.

See Rhabdocarpos clavatus.

26999 to 27002. **Trigonocarpum kansaseanus** Lesquereux. Types.
Missourian (Penn.). Osage, Kansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 822.

26982 to 26985. **Trigonocarpum perpusillus** Lesquereux. Types.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 820, pl. 110, figs. 58, 59, 59a, 61.

26006 to 26008. **Trigonocarpum schultzianus** Goeppert and Berger. Illustrated specimens.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 819, pl. 110, figs. 63, 64, 65.

26865 to 26871. **Trigoncarpum starkianus** Lesquereux. Types.
Pennsylvanian. Stark County, Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 822, pl. 111, figs. 7–13.

Trigonocarpus. See Trigonocarpum.

1295. **Triphyllopteris alleghanensis** Fontaine and I. C. White. Type.
Pocono (Miss.). Lewis Tunnel, West Virginia.

Fontaine and White, Second Geol. Surv. Pa., Rept. P. Prog., 1880, p. 6.

See Cyclopteris (Archæopteris) alleghanensis.

2190. **Triphyllopteris lescuriana** (Meek) Lesquereux. Type.
Pocono (Miss.). Lewis Tunnel, West Virginia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, I, 1880, p. 297; Atlas, pl. 50, fig. 6.

See Cyclopteris? (Archæopteris) lescuriana.

2008. **Triphyllopteris virginiana** Meek. Type.
Pocono (Miss.). Lewis Tunnel, West Virginia.

Meek, Bull. Phil. Soc. Washington, II, 1875–1880; Appendix, p. 43.

See Cyclopteris virginiesis.

16643. **Trochophyllum clavatum** Lesquereux. Type.
Monongahela? (Penn.). Near Pittsburg, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 2, pl. 3, figs. 21–23; Text, I, 1880, p. 65.

=Sigillariostrobus clavatus.

3435. **Tumion falcatum** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). Hillside near Potomac Run, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 234.

See Torreya falcata.

681. **Tumion oblanceolatum** (Lesquereux) Knowlton. Type.
Dakota? (Cret.). Near Golden, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 234.

See Torreya oblanceolata.

3455. **Tumion virginicum** (Fontaine) Knowlton. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 234.

See Torreya virginica.

1569. **Typha latissima** Al. Braun. Illustrated specimen.
Green River (Tert.). Uinta County, Wyoming, northeast of Randolph, Utah.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 141, pl. 23, fig. 4.

Ulmiphyllum. See Ulmophyllum.

3298. **Ulmophyllum brookense** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 312, 313, pl. 155, fig. 8; pl. 163, fig. 7.

3299. **Ulmophyllum crassinerve** Fontaine. Type.
Potomac (Low. Cret.). Deep Bottom, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 313, pl. 158, figs. 6, 7.

7410. **Ulmophyllum densinerve** Fontaine. Type.
Lakota (Low. Cret.). Rollins Tunnel, near Robbin's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 689, pl. 169, fig. 7.

3303. **Ulmophyllum tenuinerve** Fontaine. Type.
Potomac (Low. Cret.). 72d milepost, near Brooke, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 313, pl. 158, fig. 1.

1738. **Ulmus braunii** Heer. Illustrated specimens.
1739. Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 161, pl. 27, fig. 3.

1740. **Ulmus hilliæ** Lesquereux. Types.
1741. Green River (Tert.) Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 160, pl. 28, figs. 1, 2.

296. **Ulmus irregularis** Lesquereux. Types.
297. Denver (Cret.). Golden, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1872 [1873], p. 378.

=Ficus irregularis.

4111. **Ulmus minima** Ward. Types.
4112. Fort Union (Tert.). Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 45, pl. 23, figs. 3, 4.

8493. **Ulmus newberryi** Knowlton. Type.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.
Knowlton, Bull. No. 204, U. S. Geol. Surv., 1902, p. 54, pl. 9, fig. 4.

4114. **Ulmus orbicularis** Ward. Type.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 46, pl. 23, fig. 6.

7567. **Ulmus oregoniana** Knowlton. Types.
7568. Miocene (Tert.). Five miles north of Ashland, Oregon.
Knowlton, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1900, p. 44, pl. 2, figs. 1, 2.

4115. **Ulmus planeroides** Ward. Type.
4116. Fort Union (Tert.). Clear Creek, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 44, pl. 23, figs. 1, 2.

5189. **Ulmus pseudo-fulva?** Lesquereux. Illustrated specimen.
Miocene (Tert.). Lamar River, between Cache and Calfee creeks, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 711, pl. 88, fig. 2.

8590. **Ulmus racemosa** Thomas. Supplemental type.
Interglacial (Pleistocene). Morgantown, West Virginia.
Knowlton in I. C. White, Amer. Geol. XVIII, 1896, p. 371.

4113. **Ulmus rhamnifolia** Ward. Type.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.
Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 45, pl. 23, fig. 5.

7064 to 7068. **Ulmus speciosa** Newberry. Types.
Upper Eocene (Tert.). Bridge Creek, Crook County, Oregon.
Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 507; Mon. XXXV, U. S. Geol. Surv., 1898, p. 80, pl. 45, figs. 2–4, 7, 8.

231. 233. **Ulmus tenuinervis** Lesquereux. Types.
Green River (Tert.). Middle Park?, Florissant, Colorado.
Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 412; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 188, pl. 26, figs. 1–3.

5190. **Ulmus** sp. Knowlton (fruits of).
Fort Union (Tert.). Top of bluff, Yellowstone River, one-half mile below mouth of Elk Creek, Yellowstone National Park.
Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 712, pl. 88, figs. 3, 4.

15823. **Ulodendron ellipticum** Presl. Illustrated specimen.
Allegheny (Penn.). Morris, Illinois.
Lesquereux, Rept. Geol. Survey Illinois, IV, 1870, p. 436, pl. 23, figs. 1, 3; Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Atlas, 1879, p. 11, pl. 65, figs. 2, 3, 3a; Text, II, 1880, p. 404.

30077. **Vaccinium alaskanum** Knowlton. Types.
Eocene (Tert.). Kukak Bay, Alaska.

Knowlton, Harriman Alaska Exped., IV, 1904, p. 157, pl. 25, fig. 1.

2357. **Vaccinium coloradense** Lesquereux. Type.
Denver (Cret.). Silver Cliff, Colorado.

Lesquereux, Proc. U. S. Nat. Mus., X, 1887, p. 42, pl. 3, figs. 4, 5.

5998. 6000. **Viburnites evansanus** Ward. Types.
Dakota (Cret.). Evans's quarry, Minnekahta Creek, four miles below Hot Springs, South Dakota.

Ward, Journ. Geol., II, 1894, pp. 261, 262; Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 709, pl. 172, figs. 3, 4.

326. **Viburnum anceps** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 227, pl. 38, fig. 11.

=Platanus rhomboidea.

328. **Viburnum anomalum** Knowlton. Type.
Montana (Cret.). Point of Rocks, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 72.

See Viburnum rotundifolium.

559. 6965. **Viburnum antiquum** (Newberry) Hollick. Types.
Fort Union (Tert.). Near Fort Clarke, North Dakota.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 128, pl. 33, figs. 1, 2.

See Tilia antiqua.

4027. **Viburnum antiquum** (Newberry) Hollick. See Viburnum tilioides. (Also catalogue numbers 4036, 4151, 5302, 5303.)

563. **Viburnum asperum** Newberry. Types.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 54.

6984. **Viburnum asperum** Newberry. Illustrated specimen.
Fort Union (Tert.). Fort Union, Buford County, North Dakota.

Newberry, U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, fig. 9.

=Rhamnites concinnus.

4018 to 4023. **Viburnum asperum** Newberry. Illustrated specimens.
Fort Union (Tert.). Cracker Box Creek and Seven Mile Creek, near Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 113, pl. 55, figs. 4–9.

4049. **Viburnum betulæfolium** Ward. Type.
Fort Union (Tert.). Burns's Ranch, twelve miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 114, pl. 57, fig. 4.

533. **Viburnum contortum** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 396.

=Viburnum marginatum.

7001. **Viburnum cuneatum** Newberry. Type.
Eocene? (Tert.). Tongue River, Custer County, Montana.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 511; Mon. XXXV, U. S. Geol. Surv., 1898, p. 130, pl. 57, fig. 2.

2026. **Viburnum dakotense** Lesquereux. Type.
Fort Union (Tert.). Bad Lands, Dakota.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 231, pl. 46a, fig. 9.

323. **Viburnum dichotomum** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1872 [1873], p. 399; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 225, pl. 38, fig. 6.

4045. **Viburnum elongatum** Ward. Types.
4046. Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 112, pl. 54, figs. 4, 5.

5363. **Viburnum erectum** Ward. Type.
Fort Union (Tert.). Clear Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 112, pl. 55, fig. 3.

4050. **Viburnum finale** Ward. Type.
Fort Union (Tert.). Iron Bluff, twelve miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 115, pl. 57, fig. 5.

494. **Viburnum goldianum** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 227, pl. 60, figs. 2, 2a.

319. **Viburnum lakesii** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 226, pl. 37, fig. 13.

562. **Viburnum lanceolatum** Newberry. Types.
580. Fort Union (Tert.). Fort Union, North Dakota.

Newberry, Ann. Lyc. Nat. Hist. N. Y., IX, 1868, p. 54; U. S. Geol. Surv. Terr., Ills. Cret. and Tert. Plants, 1878, pl. 16, fig. 10; Mon. XXXV, U. S. Geol. Surv., 1898, p. 131, pl. 33, fig. 10.

2701. **Viburnum lesquereuxii longifolium** Lesquereux. Type.
2701½. Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 122, pl. 53, figs. 1, 3.

50065. **Viburnum lesquereuxii tenuifolium** Lesquereux. Type.
Dakota (Cret.). Ellsworth County, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1892, p. 123, pl. 64, fig. 13.

4011 4024 to 4026. **Viburnum limpidum** Ward. Types.
Fort Union (Tert.). Clear Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 110, pl. 53, figs. 3–6.

5375. **Viburnum macrodontum** Ward. Type.
Fort Union (Tert.). Clear Creek, above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 110, pl. 53, fig. 2.

320 to 322a. 533. **Viburnum marginatum** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 223, pl. 37, fig. 11; pl. 38, figs. 2–5.

320=Viburnum problematicum.
321, 322, 322a=Platanus marginata.
See Viburnum contortum.

4037 to 4042. **Viburnum newberrianum** Ward. Types.
Fort Union (Tert.). Crackerbox Creek, eighteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 113, pl. 56, figs. 1–6.

2024. **Viburnum nordenskiöldi** Heer. Illustrated specimen.
Fort Union (Tert.). Bad Lands, Dakota.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 230, pl. 46a, figs. 6, 7.

4015. **Viburnum nordenskiöldi** Heer. Illustrated specimen.
Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 114, pl. 57, fig. 1.

4016. **Viburnum nordenskiöldi** Heer. Illustrated specimen.
Fort Union (Tert.). Little Missouri River, North Dakota.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 114, pl. 57, fig. 3.

4017. **Viburnum nordenskiöldi** Heer. Illustrated specimen.
Fort Union (Tert.). Gladstone, North Dakota.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 114, pl. 57, fig. 2.

4043. 4044. **Viburnum oppositinerve** Ward. Types.
Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 112, pl. 55, figs. 1, 2.

4012 to 4014. **Viburnum perfectum** Ward. Types.
Fort Union (Tert.). Clear Creek, fifteen miles above Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 109, pl. 52, figs. 3, 4; pl. 53, fig. 1.

4047. **Viburnum perplexum** Ward. Types,
4048. Fort Union (Tert.). Burns's Ranch, below Glendive. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 111, pl. 54, figs. 2, 3.

327. **Viburnum platanoides** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr. VII, Pt. II, 1878, p. 224, pl. 38, fig. 8.

=Platanus platanoides.

320. **Viburnum? problematicum** Knowlton. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 71.

See Viburnum marginatum.

318. **Viburnum rotundifolium** Lesquereux. Types.
325. Montana and Laramie (Cret.) Point of Rocks and Black
328. Buttes, Wyoming.

Lesquereux, Ann. Rept. U. S. Geol. Surv. Terr., 1874 [1876], p. 305; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 225, pl. 37, fig. 12; pl. 38, fig. 10; pl. 61, fig. 22.

328=Viburnum anomalum.

5112 **Viburnum rotundifolium** Lesquereux. Illustrated specimens.
to Laramie (Cret.). North of Pinyon Peak, on Wolverine
5115. Creek, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 662, pl. 77, fig. 10; pl. 78, figs. 2, 8, 9.

4027. **Viburnum tilioides** Ward. Types.
4036. Fort Union (Tert.). Clear Creek, Montana.
4151. Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 107, pl. 51, figs. 1, 3, 8;
5302. pl. 52, fig. 2.
5303. =Viburnum antiquum.

4152. **Viburnum whymperi** Heer. Illustrated specimen.
Fort Union (Tert.). Clear Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 111, pl. 54, fig. 1.

324. **Viburnum whymperi ?** Heer. Illustrated specimens.
329. Montana (Cret.). Black Buttes and Point of Rocks, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 225, pl. 38, fig. 7; pl. 61, fig. 23.

3454. **Vitiphyllum crassifolium** Fontaine. Type.
Potomac (Low. Cret.). Roadside near Potomac Run, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 308, pl. 150, figs. 9, 10.

3194. **Vitiphyllum multifidum** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 309, pl. 173, figs. 1–9.

3951. **Vitiphyllum parvifolium** Fontaine. Type.
Potomac (Low. Cret.). Belt and Covington streets, Baltimore, Maryland.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 309, pl. 172, figs. 11, 12.

4184. **Vitis bruneri** Ward. Types.
4185. Laramie (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 69, pl. 32, figs. 1, 2.

4186. **Vitis bruneri** Ward. Illustrated specimen.
Laramie (Cret.). Carbon Station, Wyoming.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 241.

See Vitis carbonensis.

4186. **Vitis carbonensis** Ward. Type.
Laramie (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 70, pl. 32, fig. 3.

=Vitis bruneri.

4189. **Vitis cuspidata** Ward. Types.
4190. Fort Union (Tert.). Burns's Ranch and Seven Mile Creek,
4191. Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 71, pl. 32, figs. 6–8.

351. **Vitis olriki** Heer. Illustrated specimen.
Laramie? (Cret.). Evanston, Wyoming.

Lesquereux, Suppl. Fifth Ann. Rept. U. S. Geol. Surv. Terr., 1871 [1872], p. 12; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 241, pl. 41, fig. 8.

7115. **Vitis rotundifolia** Newberry. Type.
7116. Tertiary (Eocene). Cook Inlet, Alaska.

Newberry, Proc. U. S. Nat. Mus., V, 1883, p. 513; Mon. XXXV, U. S. Geol. Surv., 1898, p. 120, pl. 51, fig. 2; pl. 53, fig. 3.

513. **Vitis sparsa** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 241, pl. 60, fig. 24.

4187. **Vitis xantholithensis** Ward. Types.
4188. Fort Union (Tert.). Burns's Ranch, below Glendive, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 71, pl. 32, figs. 4, 5.

8091. **Volkmannia crassa** Lesquereux. Types.
8092. Pottsville (Penn.). Dade County, Georgia.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 719, pl. 90, fig. 1.

17772 **Volkmannia fertilis** Lesquereux. Types.
to Pennsylvanian. Archbald, Pennsylvania, and Stark County,
17775. Illinois.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 720, pl. 90, fig. 4.

18425. **Volkmannia prælonga** Lesquereux. Type.
Anthracite (Penn.). Pleasant Valley, near Pittston, Pennsylvania.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 720, pl. 90, fig. 2.

8241. **Walchia brevifolia** Emmons. Type.
Triassic. Lockville, Chatham County, North Carolina.

Emmons, Amer. Geology, VI, 1857, p. 107, fig. 74.

=Palissya brevifolia.
See Cheirolepis muensteri.

8235. **Walchia longifolius** Emmons. Types.
8236. Triassic. Lockville, Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties of North Carolina, 1856 p. 333.

=Palissya sphenolepis.
See Palissya braunii.

8243. **Walchia variabilis** Emmons. Type.
Triassic. Turners Falls, Massachusetts.

Emmons, Amer. Geology, VI, 1857, p. 108, fig. 76.

=Pagiophyllum peregrinum.
See Pachyphyllum peregrinum.

7408. **Weichselia reticulata** (Stokes and Webb) Ward.
7412. Illustrated specimens.
Lakota (Low. Cret.). Rollins Tunnel, near Robbins's Ranch, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 651, pl. 160, figs. 2, 4.

1820 to 1824. 1827. 1828. **Weinmannia haydenii** Lesquereux. Illustrated specimens.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 178, pl. 42, figs. 1–7.

1805 to 1812. 1810. **Weinmannia integrifolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 178, pl. 42, figs. 8–13.

1813 to 1819. **Weinmannia obtusifolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 178, pl. 41, figs. 4–7, 9, 10.

358 to 360. **Weinmannia rosæfolia** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 415.

=Rhus rosæfolia.

18880 to 18882. **Whittleseya microphylla** Lesquereux. Types.
Pottsville (Penn.). Washington County, Arkansas.

Lesquereux, Coal Flora, Second Geol. Surv. Pa., Rept. Prog. P, Text, III, 1884, p. 843.—Lesley, Dictionary Foss. Plants Pa., Geol. Surv. Pa., P 4, III, 1890, p. 1526.

85. 86. **Widdringtonia? complanata** Lesquereux. Types.
Montana (Cret.). Point of Rocks, Wyoming.

Lesquereux, Bull. U. S. Geol. and Geogr. Surv. Terr., I, 1875 [1876], p. 336; Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 299; ibid., 1876 [1878], p. 499; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 72, pl. 62, figs. 13, 14.

58. 1621. **Widdringtonia linguæfolia** Lesquereux. Type.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 139, pl. 21, figs. 14, 14a.

See Glyptostrobus europæus.

7360. **Williamsonia? phœnicopsoides** Ward. Type.
Lakota (Low. Cret.). South Fork of Hay Creek, near Barrett, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 668, pl. 162, fig. 20.

3753. **Williamsonia texana** Fontaine. Type.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 278, pl. 43, figs. 1, 2.

3404. **Williamsonia virginiensis** Fontaine. Type.
Potomac (Low. Cret.). Entrance to Trent's Reach; fishing hut above Dutch Gap Canal, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 273, pl. 133, figs. 5–7; pl. 165, fig. 5.

10. 28. **Woodwardia latiloba** Lesquereux. Types.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 54, pl. 3, figs. 1, 1a.

117. **Woodwardia latiloba minor** Lesquereux. Type.
Laramie (Cret.). Black Buttes, Wyoming.

Lesquereux. Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 391; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 54, pl. 4, fig. 9.

7640. 7672. **Woodwardia** sp. Knowlton.
Montana (Cret.). North Fork Dutton Creek, Albany? County, Wyoming.

Knowlton, Bull. No. 163, U. S. Geol. Surv., 1900, p. 23, pl. 3, fig. 9.

5381. **Zamia washingtoniana** Ward. Type.
Potomac (Low. Cret.). Near mouth of Doag Creek, Mount Vernon, Virginia.

Ward, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, p. 350, pl. 2, fig. 6.

3182. **Zamiopsis insignis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 162, 163, pl. 62, fig. 3; pl. 64, figs. 1, 3; pl. 65, figs. 4–6; pl. 66, fig. 2; pl. 67, fig. 7.

3422. **Zamiopsis laciniata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 164, 165, pl. 66, figs. 1, 5–8.

3292. **Zamiopsis longipennis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 164, pl. 61, fig. 8.

3431. **Zamiopsis petiolata** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 166, pl. 66, fig. 3.

3328. **Zamiopsis pinnatifida** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 161, 162, pl. 61, fig. 7; pl. 62, fig. 5; pl. 64, fig. 2; pl. 67, fig. 2.

8232. **Zamiostrobus emmonsi** Fontaine. Type.
Triassic. Chatham County, North Carolina.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 117, pl. 52, fig. 5.

=Cycadeoidea emmonsi.

100. **Zamiostrobus mirabilis** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1874 [1876], p. 309; Bull. U. S. Geol. and Geogr. Surv. Terr., I, 2d ser. No. 5, 1875 [1876], p. 383; Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 70, pl. 63, figs. 1–1d.

=Cycadeoidea mirabilis.

30973. **Zamiostrobus virginiensis** Fontaine. Types.
30974. Triassic. Gowry shaft, near Midlothian, Richmond Coal Field, Virginia.

Fontaine, Mon. VI, U. S. Geol. Surv., 1883, p. 85, pl. 47, figs. 4, 5.

8231. **Zamiostrobus virginiensis** Fontaine. Illustrated specimen.
Triassic. Chatham County, North Carolina.

Fontaine in Ward, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 301, pl. 43, fig. 2.

2622. **Zamites alaskana** Lesquereux. Type.
Neocomian (Cret.). Cape Lisburne, Alaska.

Lesquereux, Proc. U. S. Nat. Mus., XI, 1888, p. 32, pl. 10, fig. 4.

=Podozamites distantinervis.

7331. **Zamites borealis** Heer. Illustrated specimen.
Lakota (Low. Cret.). Webster's Ranch, northeast of Beulah, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 666, pl. 162, fig. 14.

7378. **Zamites brevipennis** Heer. Illustrated specimen.
7379. Lakota (Low. Cret.). John Barr's tunnel, north of forks of Hay Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 665, pl. 162, figs. 10–13.

3315. **Zamites crassinervis** Fontaine. Type.
3956. Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 172, pl. 69, fig. 4; pl. 83, fig. 3.

3370. **Zamites distantinervis** Fontaine. Type.
Potomac (Low. Cret.). Fredericksburg, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 172, pl. 83, fig. 4.

8218. **Zamites graminioides** Emmons. Type.
Triassic. Chatham County, North Carolina.

Emmons, Geol. Rept. Midland Counties North Carolina, 1856, p. 330, pl. 4, fig, 11.

=Ctenophyllum braunianum angustum.

3387. **Zamites ovalis** Fontaine. Type.
Potomac (Low. Cret.). Banks Dutch Gap Canal; fishing hut above canal; roadside near Potomac Run; near Telegraph Station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 173, pl. 85, fig. 4; pl. 170, fig. 3.

2879. **Zamites powelli** Fontaine. Illustrated specimen.
Triassic. Copper mines near Albiquiu, New Mexico.

Fontaine (in Fontaine and Knowlton), Proc. U. S. Nat. Mus., XIII, 1890, p. 284, pl. 25, fig. 5; pl. 26, figs. 7, 8.

3420. **Zamites subfalcatus** Fontaine. Type.
Potomac (Low. Cret.). Kankeys, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, p. 173, pl. 84, fig. 13; pl. 85, fig. 3.

3276. **Zamites tenuinervis** Fontaine. Type.
3792. Potomac (Low. Cret.). Fredericksburg; Kankeys; banks of Dutch Gap Canal; fishing hut above canal; telegraph station, Virginia.

Fontaine, Mon. XV, U. S. Geol. Surv., 1889, pp. 171, 172, pl. 67, fig. 1; pl. 69, fig. 2; pl. 70, fig. 1; pl. 75, fig. 3; pl. 76, fig. 7; pl. 78, fig. 6; pl. 84, fig. 7.

3742. **Zamites tenuinervis** Fontaine. Illustrated specimen.
Trinity (Low. Cret.). Glenrose, Texas.

Fontaine, Proc. U. S. Nat. Mus., XVI, 1893, p. 267, pl. 37, figs. 3, 4; pl. 38, fig. 1.

5982. **Zamites** sp. Fontaine. Illustrated specimen.
Lakota (Low. Cret.). Cliff near Robbins's Ranch on Oak Creek, Crook County, Wyoming.

Fontaine, Nineteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1899, p. 666, pl. 162, fig. 15.

480. **Zanthoxylon judlandinum** Al. Braun. Illustrated specimen.
Eocene? (Tert.). Washakie, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 294, pl. 58, fig. 10.

1904 to 1907. **Zanthoxylon spireæfolium** Lesquereux. Types.
Green River (Tert.). Florissant, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VIII, Pt. III, 1883, p. 196, pl. 40, figs. 1–3.

136. **Zingiberites dubius** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 95, pl. 16, fig. 1.

See Zingiberites? undulatus.

136. **Zingiberites? undulatus** Lesquereux. Type.
Denver (Cret.). Golden, Colorado.

Lesquereux, Ann. Rept. U. S. Geol. and Geogr. Surv. Terr., 1873 [1874], p. 396.

=Zingiberites dubius.

431. **Zizyphus cinnamomoides** Lesquereux. Type.
Green River (Tert.). Green River Station, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 277, pl. 52, fig. 8.

See Ceanothus cinnamomoides.

4183. **Zizyphus cinnamomoides** Lesquereux. Illustrated specimen.
Fort Union (Tert.). Seven Mile Creek, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 74, pl. 33, fig. 7.

2709. **Zizyphus dakotensis** Lesquereux. Type.
Dakota (Cret.). Near Fort Harker, Kansas.

Lesquereux, Mon. XVII, U. S. Geol. Surv., 1891, p. 167, pl. 36.

434. 435. **Zizyphus distortus** Lesquereux. Types.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 275, pl. 51, figs. 8, 9.

425 to 430. **Zizyphus fibrillosus** Lesquereux. Types.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 276, pl. 52, figs. 1–6.

See Ceanothus fibrillosus.

424. **Zizyphus hyperboreus?** Heer. Illustrated specimen.
Denver (Cret.). Golden, Colorado.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 276, pl. 51, fig, 15.

=Zizyphus lesquereuxii.

424. **Zizyphus lesquereuxii** Knowlton. Type.
Denver (Cret.). Golden, Colorado.

Knowlton, Bull. No. 152, U. S. Geol. Surv., 1898, p. 246.

See Zizyphus hyperboreus?

7020 to 7022. **Zizyphus longifolia** Newberry. Types.
Green River (Tert.). Green River, Sweetwater County, Wyoming.

Newberry, Mon. XXXV, U. S. Geol. Surv., 1898, p. 119, pl. 65, figs. 3–5.

419 to 423. **Zizyphus meekii** Lesquereux. Types.
Laramie (Cret.). Carbon and Black Buttes, Wyoming.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VII, Pt. II, 1878, p. 275, pl. 51, figs. 10–14.

4181. **Zizyphus meekii** Lesquereux. Illustrated specimen.
Livingston (Cret.). Bozeman coal mines, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 74, pl. 33, fig. 6.

4182. **Zizyphus meekii** Lesquereux. Illustrated specimen.
Laramie? (Cret.). Carbon Station, Wyoming.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 74, pl. 33, fig. 5.

4179. 4180. **Zizyphus serrulatus** Ward. Type.
Fort Union (Tert.). Burns's Ranch, Montana.

Ward, Bull. No. 37, U. S. Geol. Surv., 1887, p. 73, pl. 33, figs. 3, 4.

4351. **Zizyphus serrulatus** Ward. Illustrated specimen.
Fort Union (Tert.). Yellowstone River, one-half mile below mouth of Elk Creek, top of bluff, Yellowstone National Park.

Knowlton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 740, pl. 101, figs. 1, 2.

3765. **Zizyphus townsendi** Knowlton. Type.
Eocene? (Tert.). Herendeen Bay, Alaska.

Knowlton, Proc. U. S. Nat. Mus., XVII, 1894, p. 229, pl. 9, figs. 8, 9.

583. **Zonarites digitatus** Brongniart. Illustrated specimen.
Dakota (Cret.). Six miles north of Fort Harker, Kansas.

Lesquereux, Rept. U. S. Geol. Surv. Terr., VI, Pt. I, 1874, p. 44, pl. 1, fig. 1.

SECTION IV.

LIST OF MINERALS, METEORITES, ROCKS, AND ORES THAT HAVE BEEN THE SUBJECT OF SPECIAL INVESTIGATION AND PUBLICATION, AND ARE NOW IN THE DEPARTMENT OF GEOLOGY, U. S. NATIONAL MUSEUM.

INTRODUCTION.

The object of the list here given is to place on record the whereabouts of sundry mineralogical and geological materials, which, viewed from a biological standpoint, might, in part at least, be considered as types, since they represent the original materials upon which new names are based and conclusions founded. It is doubtful, however, if the term *type* can be appropriately used in this connection, and it has, therefore, been wholly eliminated.

It may be well to state, in this connection, that, in accordance with the law of 1880, there have been transferred to the department from the United States Geological Survey a considerable number of collections representing the work of various investigators in special areas. While in the majority of cases much of this material and the thin sections of the same have been temporarily retained at the Survey for reference purposes, such are nevertheless enumerated here as a matter of record.

LIST OF MINERALS, METEORITES, ROCKS, AND ORES THAT HAVE BEEN THE SUBJECT OF SPECIAL INVESTIGATION AND PUBLICATION, AND ARE NOW IN THE DEPARTMENT OF GEOLOGY, U. S. NATIONAL MUSEUM.

I. MINERALS.

48413. **Allanite.**
Devils Head Mountain, Douglas County, Colorado.
Eakins, L. G., Proc. Colo. Soc., pt. 1, 1885, p. 32.

82392. **Alunite.**
Rosita Hills, Custer County, Colorado.
Cross, C. W., Amer. Journ. Sci., vol. 41 (3), 1891, p. 460.

83250. **Analcite.**
Table Mountain, near Golden, Jefferson County, Colorado.
Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 27–29.

47698. **Antlerite.** New mineral named.
Antler mine, Yucca Station, Mohave County, Arizona.
Hillebrand, W. F., Bull. No. 55, U. S. Geol. Surv., 1889, p. 54.

83234 to 83240. **Apophyllite.**
North Table Mountain, near Golden, Jefferson County, Colorado.
Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 29–35.

48554. **Astrophyllite.**
Near Cheyenne Mountain, El Paso County, Colorado.
Eakins, L. G., Amer. Journ. Sci., vol. 42 (3), 1891, p. 34.

81857. **Bastnäsite.**
Cheyenne Mountain, near Pikes Peak, El Paso County, Colorado.
Hillebrand, W. F., Amer. Journ. Sci., vol. 7 (4), 1899, pp. 51–53.

83279. **Bole.**
South Table Mountain, near Golden, Jefferson County, Colorado.

Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 38–39.

84531 (a). **Carnotite.**
85711 (b). (a) Copper Prince claim, Roc Creek, Montrose County,
85712 (c). Colorado.
(b) Yellow Boy claim, La Sal Creek, Montrose County, Colorado.
(c) Yellow Bird claim, Montrose County, Colorado.

Hillebrand (W. F.) and Ransome (F. L.), Amer. Journ. Sci., vol. 10 (4), 1900, pp. 120–144.

83241 to 83247. **Chabazite.**
North Table Mountain, near Golden, Jefferson County, Colorado.

Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 23–24.

83316. **Chenevixite.**
American Eagle mine, Tintic District, Utah.

Hillebrand, W. F., Bull. No. 20, U. S. Geol. Surv., 1885, p. 85.

48098 to 48108. **Clinoclasite.**
Mammoth mine, Tintic District, Utah.

Hillebrand, W. F., Amer. Journ. Sci., vol. 35 (3), 1888, p. 303.

84692. **Coloradoite.**
Norwegian mine, Robinsons Ferry, Calaveras County, California.

Hillebrand, W. F., Amer. Journ. Sci., vol. 8 (4), 1899, p. 297.

83315. **Conichalcite.**
American Eagle mine, Tintic District, Utah.

Hillebrand, W. F., Bull. No. 20, U. S. Geol. Surv., 1885, p. 84.

48678. **Copper,** after Azurite.
Copper Glance and Potosi mines, Grant County, New Mexico.

Yeates, W. S., Amer. Journ. Sci., vol. 38 (3), 1889, p. 405.

84070. **Covellite.**
Grayrock mine, Butte, Montana.

Hillebrand, W. F., Amer. Journ. Sci., vol. 7 (4), 1899, p. 56.

83292. **Cryolite.**
83293. Eureka Tunnel and Cincinnati mine, St. Peters Dome, Pikes Peak, El Paso County, Colorado.

Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 41.

83711. **Diaspore.**
Mount Robinson, Rosita Hills, Custer County, Colorado.

Cross, C. W., Amer. Journ. Sci., vol. 41 (3), 1891, p. 460.

48200. **Dumortierite.**
Near Clip, Yuma County, Arizona.

Diller (J. S.) and Whitfield (J. E.), Amer. Journ. Sci., vol. 37 (3), 1889, p. 216.

45514. **Dumortierite.**
Harlem, New York.

Diller (J. S.), and Whitfield (J. E.), Amer. Journ. Sci., vol. 37 (3), 1889, p. 216.

83302. **Elpasolite.** New mineral named.
Cincinnati mine, St. Peters Dome, Pikes Peak, El Paso County, Colorado.

Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 57.

48112. **Erinite.**
Mammoth mine, Tintic District, Utah.

Hillebrand, W. F., Amer. Journ. Sci., vol. 35 (3), 1888, p. 399.

85154. **Footeite.** New mineral named.
Copper Queen mine, Bisbee, Cochise County, Arizona.

Koenig, G. A., Proc. Acad. Nat. Sci. Phila., 1891, p. 289.

82622. **Freieslebenite.**
Garfield (King Cole) mine, Cascade Mountain, Gunnison County, Colorado.

Eakins, L. G., Amer. Journ. Sci., vol. 36 (3), 1888, p. 452.

48414. **Gadolinite.**
49092. Devils Head Mountain, Douglas County, Colorado.

Eakins, L. G., Proc. Colo. Soc., 1885, p. 33.

83589. **Galena.**
Minnie Moore mine, Bellevue, Blaine County, Idaho.

Cross, C. W., Proc. Colo. Soc., 1887, pp. 171–174.

51457. **Garnet.**
Nathrop, Chaffee County, Colorado.

Cross, C. W., Proc. Colo. Soc., 1886, p. 65.

51360. **Garnet.**
Llano County, Texas.

Melville, W. H., Bull. No. 90, U. S. Geol. Surv., 1892, pp. 39–40.

83300. **Gearksutite.**
Cincinnati mine, St. Peters Dome, Pikes Peak, El Paso County, Colorado.

Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 58.

48408. **Guitermanite.** New mineral named.
Zuñi mine, near Silverton, San Juan County, Colorado.

Hillebrand, W. F., Proc. Colo. Soc., 1884, p. 129; Bull. No. 20, U. S. Geol. Surv., 1885, p. 105.

48429. **Gyrolite.**
New Almaden, California.

Clarke, F. W., Amer. Journ. Sci., vol. 38 (3), 1889, p. 128.

84610. **Halotrichite.**
St. Pauls mine, near Whitehall, Montana.
Hillebrand, W. F., Amer. Journ. Sci., vol. 7 (4), 1899, p. 56.

48089. **Hanksite.** New mineral named.
Borax Lake, San Bernardino County, California.
Hidden, W. E., Amer. Journ. Sci., vol. 30 (3), 1885, p. 133.

82555. **Hydronephelite.** New mineral named.
Litchfield, Maine.
Clarke, F. W., Amer. Journ. Sci., vol. 31 (3), 1886, p. 265.

51671. **Josephinite.** New mineral named.
Josephine and Jackson counties, Oregon.
Melville, W. H., Amer. Journ. Sci., vol. 43 (3), 1892, p. 509.

83312 to 83314. **Kaolinite.**
Eureka Tunnel, St. Peters Dome, Pikes Peak, El Paso County, Colorado.
Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 67.

83275 to 83277. **Levynite.**
North Table Mountain, near Golden, Jefferson County, Colorado.
Cross (C. W.) and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 37–38.

83288. **Löllingite.**
Horace Porter mine, southeast face White Rock Mountain, West Brush Creek, Gunnison County, Colorado.
Hillebrand, W. F., Bull. No. 20, U. S. Geol. Surv., 1885, p. 89.

51307. **Lucasite.** New mineral named.
Corundum Hill, Macon County, North Carolina.
Chatard, T. M., Amer. Journ. Sci., vol. 32 (3), 1886, p. 375.

84691. **Melonite.**
Melone's mine, Robinsons Ferry, Calaveras County, California.
Hillebrand, W. F., Amer. Journ. Sci., vol. 8 (4), 1899, p. 295.

83228 to 83232. **Mesolite.**
North Table Mountain, near Golden, Jefferson County, Colorado.
Cross (C. W.) and Hillebrand (W, F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 35.

51108. **Metacinnabarite.**
Cerro Gordo mine, near Panoche, Fresno County, California.
Melville (W. H.), and Lindgren (W.), Bull. No. 61, U. S. Geol. Surv., 1890, p. 22.

50185. **Metastibnite.** New mineral named.
Steamboat Springs, Washoe County, Nevada.
Becker, G. F., Mon. XIII, U. S. Geol. Surv., 1888, p. 389.

48246. **Mixite.**
Mammoth mine, Tintic District, Utah.
Hillebrand, W. F., Amer. Journ. Sci., vol. 35 (3), 1888, p. 305.

83233. **Natrolite.**
South Table Mountain, near Golden, Jefferson County, Colorado.
Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 36.

83315. **Olivenite.**
American Eagle mine, Tintic District, Utah.
Hillebrand, W. F., Bull. No. 20, U. S. Geol. Surv., 1885, p. 83.

83294 to 83299. **Pachnolite.**
Eureka Tunnel and Cincinnati mine, St. Peters Dome, Pikes Peak, El Paso County, Colorado.
Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 65.

84690 (a). **Petzite.**
84689 (b). (a) Ford's mine, Robinsons Ferry, Calaveras County, California.
(b) Melone's mine, Robinsons Ferry, Calaveras County, California.
Hillebrand, W. F., Amer. Journ. Sci., vol. 8 (4), 1899, p. 296.

48604. **Plattnerite.**
You Like mine, Coeur d'Alene Mountains, Mullan, Idaho.
Yeates (W. S.), and Ayres (E. F.), Amer. Journ. Sci., vol. 43 (3), 1891, p. 407.

51107. **Polybarite.**
Yankee Boy mine, Ouray, Ouray County, Colorado.
Penfield, S. L., Amer. Journ. Sci., vol. 40 (3), 1890, p. 424.

41138. **Powellite.** New mineral named.
Peacock lode, Seven Devils District, Idaho.
Melville, W. H., Amer. Jonrn. Sci., vol. 41 (3), 1891, p. 138.

45875. **Prochlorite.**
Waterworks tunnel, Washington, District of Columbia.
Clarke (F. W.), and Schneider (E. A.), Amer. Journ. Sci., vol. 40 (3), 1890, p. 406.

83305 to 83308. **Prosopite.**
Cincinnati mine and Eureka Tunnel, St. Peters Dome, Pikes Peak, El Paso County, Colorado.
Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 62.

84449. **Prosopite.**
Dugway District, Tooele County, Utah.
Hillebrand, W. F., Amer. Journ. Sci., vol. 7 (4), 1899, pp. 53–55.

83283. **Ptilolite.** New mineral named.
Green Mountain, near Cold Spring Ranch, between Golden and Morrison, Jefferson County, Colorado.
Cross (C. W.), and Eakins (L. G.), Proc. Colo. Soc., 1886, p. 71.

83303. **Ralstonite.**
Cincinnati mine, St. Peters Dome, Pikes Peak, El Paso County, Colorado.

Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 56.

84451. **Roscoelite.**
84452. Stockslager mine, near Placerville, California.

Hillebrand (W. F.), Turner (H. W.), and Clarke (F. W.), Amer. Journ. Sci., vol. 7 (4), 1899, pp. 451–458.

85714. **Roscoelite.**
Near Placerville, San Miguel County, Colorado.

Hillebrand (W. F.), and Ransome (F. L.), Amer. Journ. Sci., vol. 10 (4), 1900, pp. 120–144.

83273. **Scolecite.**
83274. North Table Mountain, near Golden, Jefferson County, Colorado.

Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 35.

83512. **Spangolite.**
Globe District (?) near Tombstone, Arizona.

Penfield, S. L., Amer. Journ. Sci., vol. 39 (3), 1890, p. 370.

83248. **Stilbite.**
83249. North Table Mountain, near Golden, Jefferson County, Colorado.

Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 19–23.

83251 to 83270. **Thomsonite.**
North Table Mountain, near Golden, Jefferson County, Colorado.

Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, pp. 18–19 and 24–27.

51456. **Topaz.**
Nathrop, Colorado.

Cross, C. W., Proc. Colo. Soc., 1886, p. 66.

81244, 81247 (a). **Topaz.**
81253, 81254 (b).
81255 (d).
81256 (c).
82868 (d).
82336 (e).
47119 (f).
81259 (g).
49248, 50037 (h).
82873 (i).
45191 (k).
82579 (l).

(a) Alabashka, the Urals.
(b) Ilmen Mountains, Miask.
(c) Urulga River.
(d) Adun-Chalon Mountains.
(e) Schneckenstein.
(f) Takayama.
(g) Villa Rica.
(h) San Luis Potosi.
(i) Pikes Peak.
(k) Thomas Range.
(l) Bald-face Mountain.

Eakle, A. S., Proc. U. S. Nat. Mus., No. 1148, vol. 21, 1898, pp. 361–369.

51575. **Tourmaline.**
Colfax, Nevada County, California.
Melville, W. H., Bull. No. 90, U. S. Geol. Surv., 1892, p. 39.

49452. **Tourmaline.**
Etchison, Montgomery County, Maryland.
Gill, A. C., Johns Hopkins Univ. Circular, No. 75, 1889.

49514. **Tscheffkinite.**
Bedford County, Virginia.
Eakins, L. G., Amer. Journ. Sci., vol. 42 (3), 1891, p. 36.

48121. **Tyrolite.**
Mammoth mine, Tintic District, Utah.
Hillebrand, W. F., Amer. Journ. Sci., vol. 35 (3), 1888, p. 300.

81857. **Tysonite.**
Cheyenne Mountain, Pikes Peak, El Paso County, Colorado.
Hillebrand, W. F., Amer. Journ. Sci., vol. 7 (4), 1899, pp. 51–53.

83561 to 83572. **Uraninite.**
Various localities.
Hillebrand, W. F., Amer. Journ. Sci., vol. 40 (3), 1890, p. 390; Bull. No. 78, 1891, U. S. Geol. Surv.

85714. **Vanadiferous sandstone.**
Near Placerville, San Miguel County, Colorado.
Hillebrand (W. F.), and Ransome (F. L.), Amer. Journ. Sci., vol. 10 (4), 1900, pp. 120–144.

48412. **Warrenite.** New mineral named.
Domingo mine, Gunnison County, Colorado.
Eakins, L. G., Amer. Journ. Sci., vol. 36 (3), 1888, p. 450.

83428. **Willemite.**
Sedalia copper mine, Sedalia, Douglas County, Colorado.
Penfield, S. L., Amer. Journ. Sci., vol. 47 (3), 1894, p. 307.

48812. **Xanthitane.**
Green River, Henderson County, North Carolina.
Eakins, L. G., Amer. Journ. Sci., vol. 35 (3), 1888, p. 418.

83291. **Zinckenite.**
Brobdignag mine, Red Mountain, San Juan County, Colorado.
Hillebrand, W. F., Bull. No. 20, U. S. Geol. Surv., 1885, p. 93.

83311. **Zircon.**
Eureka Tunnel, St. Peters Dome, Pikes Peak, El Paso County, Colorado.
Cross (C. W.), and Hillebrand (W. F.), Bull. No. 20, U. S. Geol. Surv., 1885, p. 66.

49082. **Zunyite.** New mineral name.
Zuñi mine, Anvil Mountain, near Silverton, Colorado.
Hillebrand, W. F., Proc. Colo. Soc., 1884, p. 124.

II. METEORITES.

44363. Abert iron, locality unknown.

Riggs, R. B., Bull. No. 42, U. S. Geol. Surv., 1887, pp. 95–96.

84798. Admire, Lyon County, Kansas.

Merrill, G. P., Proc. U. S. Nat. Mus., vol. 24, 1902, pp. 907–913.

84587. Allegan, Thomas Hill, Saugatuck road, Allegan County, Michigan.

Merrill (G. P.), and Stokes (H. N.), Proc. Wash. Acad. Sci., vol. 2, July 25, 1900, pp. 41–68.

76.* Auburn, Macon County, Alabama.

Shepard, C. U., Amer. Journ. Sci., vol. 47 (2), 1869, p. 230.

34.* Babbs Mill, Green County, Tennessee.

Shepard, C. U., Amer. Journ. Sci., vol. 4 (2), 1847, p. 76.

81155. Beaver Creek, West Kootenai District, British Columbia.

Howell, E. E., Science, July 21, 1893, p. 41; Amer. Journ. Sci., vol. 47 (3), 1894, pp. 430–431.

166.* Bishopville, Sumter County, South Carolina.

Shepard, C. U., Amer. Journ. Sci., vol. 6 (2), 1848, p. 403.

47183. Cabin Creek, Johnson County, Arkansas.

Whitfield, J. E., Amer. Journ. Sci., vol. 33 (3), 1887, p. 500.

86075. Casas Grandes, Chihuahua, Mexico.

Tassin, Wirt, Proc. U. S. Nat. Mus., No. 1277, vol. 35, 1902, pp. 69–74.

48824. Colfax, Rutherford County, North Carolina.

Eakins, L. G., Amer. Journ. Sci., vol. 39 (3), 1890, p. 395; Bull. No. 78, U. S. Geol. Surv., 1891, p. 93.

47736. Crab Orchard, Crab Orchard Mountains, Powder Mill Creek, Rockwood, Tennessee.

Whitfield, J. E., Amer. Journ. Sci., vol. 34 (3), 1887, pp. 387–390.

90.* Dalton, Whitfield County, Georgia.

Shepard, C. U., Amer. Journ. Sci., vol. 26 (3), 1883, p. 336.

121.* Estherville, Emmet County, Iowa.

Shepard, C. U., Amer. Journ. Sci., vol. 18 (3), 1879, p. 186.

47912. Fayette County, Texas.

Whitfield (J. E.), and Merrill (G. P.), Amer. Journ. Sci., vol. 36 (3), 1888, pp. 113–119.

84744. Felix, Perry County, Alabama.

Merrill, G. P., Proc. U. S. Nat. Mus., vol. 24, 1901, pp. 193–198.

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*Shepard Collection; the number is that of his catalogue.

45939. Grand Rapids, Michigan.

Riggs, R. B., Amer. Journ. Sci., vol. 30 (3), 1885, p. 312.

170.* Hartford, Linn County, Iowa.

Shepard, C. U., Amer. Journ. Sci., vol. 4 (2), 1847, pp. 288–289.

77.* Losttown, Cherokee County, Georgia.

Shepard, C. U., Amer. Journ. Sci., vol. 47 (2), 1869, p. 234.

84600. Mart, McClennan County, Texas.

Merrill (G. P.), and Stokes (H. N.), Proc. Wash. Acad. Sci., vol. 2, July 25, 1900, pp. 41–68.

173.* Monroe, Cabarrus County, North Carolina.

Shepard, C. U., Amer. Journ. Sci., vol. 10 (2), 1850, p. 127.

51672. Morristown, Hamblen County, Tennessee.

Eakins, L. G., Amer. Journ. Sci., vol. 46 (3), 1893, pp. 283–285; Bull. No. 113, U. S. Geol. Surv., 1893, p. 61.

51110. Mount Joy, Adams County, Pennsylvania.

Howell, E. E., Amer. Journ. Sci., vol. 44 (3), 1892, pp. 415–416.

85133. Mount Vernon, seven miles northeast of Hopkinsville, Christian County, Kentucky.

Tassin, Wirt, Proc. U. S. Nat. Mus., No. 1392, vol. 27, 1905, pp. 213–217.

85226. Persimmon Creek, near Hothouse, Cherokee County, North Carolina.

Tassin, Wirt, Proc. U. S. Nat. Mus., No. 1380, vol. 27, 1904, pp. 955–959.

155.* Richmond, Virginia.

Shepard, C. U., Amer. Journ. Sci., vol. 6 (2), 1829, p. 411; vol. 30 (3), 1885, p. 106.

46.* Ruffs Mountain, Lexington County, South Carolina.

Shepard, C. U., Amer. Journ. Sci., vol. 10 (2), 1850, p. 128.

47833. San Emigdio Range, San Bernardino County, California.

Merrill, G. P., Proc. U. S. Nat. Mus., XI, 1888, pp. 161–167.

47184. Scottsville, Allen County, Kentucky.

Whitfield, J. E., Amer. Journ. Sci., vol. 33 (3), 1887, pp. 500–501.

48488. Travis County, Texas.

Eakins, L. G., Amer. Journ. Sci., vol. 39 (3), 1890, pp. 59–61; Bull. No. 78, U. S. Geol. Surv., 1891, p. 91.

86074. Tucson, Arizona.

Smithsonian Report, 1863, p. 85.

53.* Union County, Georgia.

Shepard, C. U., Amer. Journ. Sci., vol. 17 (2), 1854, p. 328.

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*Shepard Collection; the number is that of his catalogue.

III. ROCKS AND ORES.

67409 to 67412. Alaska. Nephrite and jadeite, 4 specimens.

Clarke and Merrill, Proc. U. S. Nat. Mus., XI, 1888, pp. 115–130, pl. 32.

75269. Arizona. Rocks from the Globe Copper District, 255 specimens.

Ransome, U. S. Geol. Surv., Prof. Paper 12, 1903.

4873. 4885. Arkansas. Rocks from Fourche Cove, 13 specimens.

Powell, Geol. Rept. upon the Fourche Cove, 1842.

61410. Bogosloff Island. The volcanic rocks of Bogosloff Island, in Bering Sea, 14 specimens.

Merrill, Science, n. s., IV, 1884, p. 524; Proc. U. S. Nat. Mus., VIII, 1885, pp. 31–33; Amer. Nat., XIX, 1885, p. 994.

74076. British Columbia. Magnetite replaced by limestone, 2 specimens.

Kimball, Amer. Geol., XX, 1897, pp. 13–27.

61310. to 61316. California. Quicksilver deposits of the Pacific slope, 2,908 specimens.

Becker, Mon. XIII, U. S. Geol. Surv., 1888; Eighth Ann. Rept. U. S. Geol. Surv., Pt. II, 1889, pp. 961–985, pls. 62, 63.

(Also catalogue numbers 66761 to 66763, 66769 to 66771, 66774 to 66775, 66777, 66778, 66780 to 66784.)

63558. California. Rocks and ores from Nevada City District, 335 specimens.

Lindgren, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, pp. 1–262; U. S. Geol. Surv., Folio No. 29, Geol. Atlas, 1898.

52051. California. Rocks from Chico Quadrangle, 86 specimens.

Turner, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1896, pp. 540–551.

52051. 61083. 61084. 61309. California. Rocks from Downieville Quadrangle, 162 specimens.

Turner, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1896, pp. 591–655; Folio No. 37, Geol. Atlas, 1897.

52101. California. Rocks from Jackson Quadrangle, 58 specimens.

Turner and Becker, U. S. Geol. Surv., Folio No. 11, Geol. Atlas. 1894.

61398 to 61400. California. Rocks of the Sierra Nevada, 7 specimens.

Turner, Fourteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1894, pp. 435–495, pls. 48–59.

(Also catalogue numbers 62051 to 62054.)

52101. California. Rocks from Sonora Quadrangle, 63 specimens.

Turner and Ransome, U. S. Geol. Surv., Folio No. 41, Geol. Atlas, 1897.

52051. California. Rocks from the Bidwell Bar Quadrangle, 89 specimens.

Turner, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1896, pp. 552–590; U. S. Geol. Surv., Folio No. 43, Geol. Atlas, 1898.

53796. California. Rocks from the Bigtrees Quadrangle, 39 specimens.

Turner, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1896, pp. 696–701; Turner and Ransome, U. S. Geol. Surv., Folio No. 51, Geol. Atlas, 1898.

73749 to 75271. California. Rocks from the San Luis Quadrangle, 201 specimens.

Fairbanks, U. S. Geol. Surv., Folio No. 101, Geol. Atlas, 1904.

63420. Colorado. Rocks and ores from Cripple Creek District, 680 specimens.

Cross, U. S. Geol. Surv., Folio No. 7, Geol. Atlas, 1894.—Cross and Penrose, Sixteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1895, pp. 13–109.

73716. 75274. Colorado. Rocks and ores from the Telluride Quadrangle, 373 specimens.

Purrington, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, pp. 745–850, pls. 103–108; U. S. Geol. Surv., Folio No. 57, Geol. Atlas, 1898.

73501. Colorado. Rocks from Anthracite and Crested Butte quadrangles, 514 specimens.

Cross, U. S. Geol. Surv., Folio No. 9, Geol. Atlas, 1894.

51334 to 51535. Colorado. Rocks from Leadville region, 1,091 specimens.

Emmons, Second Ann. Rept. U. S. Geol. Surv., 1882, pp. 201–290, pls. 44, 45.—Emmons, Cross, and Guyard, Mon. XII, U. S. Geol. Surv., 1886.

(Also catalogue numbers as follows: 65835 to 66013, 66358 to 66433, 68801 to 69084, 69089 to 69190, 69344 to 69548.)

63682. 74077. Colorado. Rocks from Pikes Peak Quadrangle, 467 specimens.

Cross, U. S. Geol. Surv., Folio No. 7, Geol. Atlas, 1894.

65724 to 65834. Colorado. Rocks from Querida, Rosita Hills, and Silver Cliff quadrangles, Custer County, 108 specimens.

Emmons, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, pp. 405–472, pl. 37.

73513. Colorado. Rocks from Silver Cliff and Rosita Hills districts, 352 specimens.

Cross, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, pp. 263–404, pls. 25–37.

52940. Colorado. Rocks from the Geyser mine, Silver Cliff District, Custer County, 44 specimens.

Emmons, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, pp. 452–472.

75428. Colorado. Rocks from the La Plata Quadrangle, 150 specimens.

Cross, Spencer, and Purrington, U. S. Geol. Surv., Folio No. 60, Geol. Atlas, 1899.

74120 to 74228. Colorado. Rocks from the Rico Mountains, 107 specimens.

Ransome, Twenty-second Ann. Rept. U. S. Geol. Surv., Pt. II, 1902, pp. 237–397.

74229 to 74386. Colorado. Rocks from the Silverton Quadrangle, 157 specimens.

Ransome, Bull. No. 182, U. S. Geol. Surv., 1901.

73690. Colorado. Rocks from the Tenmile District, 154 specimens.

Cross, Fourteenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1894, pp. 222–224.—Emmons, U. S. Geol. Surv., Folio No. 48, Geol. Atlas, 1898.

74667. Colorado. Rocks of the Denver Basin, 226 specimens.

Emmons, Cross, and Eldridge, Mon. XXVII, U. S. Geol. Surv., 1896.

62645 to 62656. Colorado. Silver ores of the Silver Cliff District, Custer County, 83 specimens.

Emmons, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. II, 1896, pp. 405–472, pl. 37.

62628 to 62631. 63639. Colorado. Spherulites in acid eruptive rocks, 6 specimens.

Cross, Bull. Wash. Philos. Soc., XI, 1891, pp. 411–443, pls. 5, 6.

20301 to 22792. Colorado (and Nevada). Rocks from U. S. Exploration of the 40th Parallel, 3,250 specimens.

Zirkel, Rept. Geol. Expl. of 40th Parallel, VI, 1876.

6935 to 6938. District of Columbia. Granitic rocks, fresh and disintegrated, 4 specimens.

Merrill, Bull. Geol. Soc. Amer., VI, 1895, pp. 321–332.

Fortieth Parallel Collections. See Colorado and Nevada.

67524 to 67536. Galapagos Islands. Rocks.

Merrill, Bull. Mus. Comp. Zool., Harvard College, XVI, No. 13, 1893.

63887. 75478 to 75491. Greenland. Rocks from Umanak Island and Nugsuaks Peninsula, 85 specimens.

Phalen, Smithsonian Misc. Coll. Quart., XLV, 1904, pp. 183–212, pls. 53–55.

53811 to 54081. Hawaiian Islands. Nepheline-melilite-basalt, 507 specimens.

Merrill, Amer. Geol., XXV, 1900, pp. 312, 313.

75273. Idaho. Rocks from Silver City and Nampa quadrangles, 44 specimens.

Lindgren and Drake, U. S. Geol. Surv., Folio No. 104, Geol. Atlas, 1904.

73756. Idaho. Rocks from the Boise Quadrangle, 49 specimens.

Lindgren, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, pp. 705, 706; U. S. Geol. Surv., Folio No. 45, Geol. Atlas, 1898.

75391. Idaho. The gold and silver veins of Silver City, De Lamar, and other mining districts in Idaho, 76 specimens.

Lindgren, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, pp. 75–256.

62738 to 62746. Lake Superior. Rocks illustrating the pre-Cambrian geology of the Lake Superior District.

From the Penokee District, Michigan, 77 specimens.

Irving and Van Hise, Mon. XIX, U. S. Geol. Surv., 1892, pp. 106–122, 127–345.

From the Marquette District, Michigan, 144 specimens.

Van Hise and Bayley, Fifteenth Ann. Rept. U. S. Geol. Surv., 1895, pp. 490–607; Mon. XXVIII, U. S. Geol. Surv., 1897, pp. 152–524.

From Pigeon Point, Minnesota, 16 specimens.

Bayley, Bull. No. 109, U. S. Geol. Surv., 1893.

28523. Maine. Basic and eruptive rocks from Lewiston and Auburn, Androscoggin County, 30 specimens.

Merrill, Amer. Geol., X, 1892, pp. 49–55.

(Also catalogue numbers 28524 to 28534, 39194 to 39199.)

39044. Maine. Peridotite from Little Deer Island, Penobscot Bay.

Merrill, Proc. U. S. Nat. Mus., XI, 1888, pp. 191–195; Amer. Jour. Sci. (3), xxxv, 1888, pp. 489–490.

52939. Maine. Rocks from Monhegan Island.

Lord, Amer. Geol., XXVI, 1900, pp. 329–347, pl. 23.

52938. Massachusetts. Archæan rocks from the Green Mountains, 349 specimens.

Pumpelly, Wolff, and Dale, Mon. XXIII, U. S. Geol. Surv., 1894.

61411. 61412. Massachusetts. Fresh and disintegrated diabase from Medford, 2 specimens.

Merrill, Bull. Geol. Soc. Amer., VII, 1896, pp. 349–362, pl. 16.

75251. Massachusetts. Plumose diabase, Holyoke Reservoir, 14 specimens.

Emerson, Bull. Geol. Soc. Amer., XVI, 1905, p. 91.

38512 to 38528. Massachusetts. Rocks illustrating the geology of the Boston Basin, 18 specimens.

Merrill in Crosby, Geol. of Boston Basin, I, Pt. I, 1893, pp. 31–44.

64987. Mexico. Native gold in granite.

Merrill, Amer. Journ. Sci. (4), I, 1896, pp. 309–311.

53266 to 53304. Mexico. Rocks from boundary between United States and Mexico, 151 specimens.

Lord, Proc. U. S. Nat. Mus., XXI, 1899, pp. 773–782, pl. 85.

74721. Montana. Rocks from Fort Benton Quadrangle, 25 specimens.

Weed, U. S. Geol. Surv., Folio No. 55, Geol. Atlas, 1899.

74486. Montana. Rocks from High Wood Mountains, 46 specimens.

Weed, Bull. Geol. Soc. Amer., VI, 1895, pp. 389–422, pls. 24–26.

74750. Montana. Rocks from Livingston and Little Belt Mountains, 104 specimens.

Iddings and Weed, U. S. Geol. Surv., Folio No. 1, Geol. Atlas, 1894.
Weed, U. S. Geol. Surv., Folio No. 56, Geol. Atlas, 1899.

53080. Montana. Rocks from the Bear Paw Mountains, 54 specimens.

Weed and Pirsson, Amer. Journ. Sci. (4), I, 1896, pp. 287–301, 351–362; II, 1896, pp. 136–148, 188–199.

52941. Montana. Rocks from the Castle Mountain District, 88 specimens.

Weed and Pirsson, Bull. No. 139, U. S. Geol. Surv., 1896, pp. 80–142.
Weed, U. S. Geol. Surv., Folio No. 56, Geol. Atlas, 1899.

74081. 74725. Montana. Rocks from the Elkhorn Mining District, 239 specimens.

Weed and Barrell, Twenty-second Ann. Rept. U. S. Geol. Surv., Pt. II, 1901, pp. 407–549, pls. 42–62.

52976. Montana. Rocks from the Judith Mountains, 135 specimens.

Weed and Pirsson, Eighteenth Ann. Rept. U. S. Geol. Surv., Pt. III, 1898, pp. 485–575.

53643. Montana. Rocks from the Little Belt Mountains, 389 specimens.

Weed and Pirsson, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. III, 1899, pp. 271–581, pls. 36–77.

53025. Montana. Rocks from the Little Rocky Mountains, 28 specimens.

Weed and Pirsson, Journ. of Geol., IV, 1896, pp. 399–428.

38570. Montana. Rocks from the Three Forks Quadrangle, 370 specimens.

Peale and Merrill, Bull. No. 110, U. S. Geol. Surv., 1893, pp. 47–54; U. S. Geol. Surv., Folio No. 24, Geol. Atlas, 1896; Proc. U. S. Nat. Mus., XVII, 1894, pp. 637–673.

(Also catalogue numbers 38571 to 38601, 62400 to 62410, 72862 to 72870, 73166 to 73175.)

35889. Montana (and Idaho). Pliocene sands.

Merrill, Amer. Journ. Sci. (3), XXXII, 1886, pp. 199–204.

(Also catalogue numbers 35890 to 35893, 38430 to 38449.)

38452. Nebraska. Volcanic dust from near Harlan.

Merrill, Proc. U. S. Nat. Mus., VIII, 1885, pp. 99, 100.

33391 to 33714. Nevada. Rocks and ores from Comstock Lode, 337 specimens.

Hague and King, U. S. Geol. Expl., 40th Par., III, 1870.

(Also catalogue numbers 49305 to 49318.)

20301 to 23071. Nevada. Rocks collected by Fortieth Parallel Survey.

Zirkel, U. S. Geol. Surv., 40th Par., VI, 1876.

66091 to 66353. Nevada. Rocks from Ruby Hill, Eureka District, 263 specimens.

Curtis, Fourth Ann. Rept. U. S. Geol. Surv., 1884, pp. 221–251, pls. 31–33; Mon. VII, U. S. Geol. Surv., 1884.

24001. to 24198. 71292 to 72748. Nevada. Rocks from the Comstock Lode and the Washoe District, 2,557 specimens.

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23101. to 23606. Nevada. Rocks from the Eureka District, 640 specimens.

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